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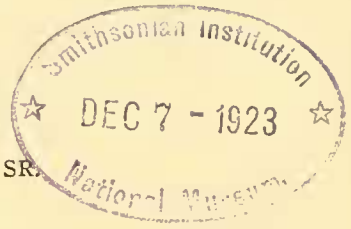
EXPEDITION OF THE CALIFORNIA ACADEMY
OF SCIENCES TO THE GULF OF
CALIFORNIA IN 1921¹

THE TENEBRIONIDÆ

BY

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One of the most interesting collections of Coleoptera that has been made in Lower California since that secured by Dr. Gustave Eisen in 1893 in the region about San José del Cabo, was taken by the Expedition of the California Academy of Sciences to the islands of the Gulf of California.

Of this material the Coleoptera belonging to the family Tenebrionidæ were submitted to me for study and they have proved by far the richest aggregation of species peculiar to the hot and arid Sonoran desert region that it has ever been my pleasure to examine. The total number of specimens of Tenebrionidæ in this material is 1410, representing 103 species and races of which 60 are new to science. These belong to 19 tribes and 41 genera of which four are new. The known range of several species has been extended, notably *Craniothus pubescens* Lec., heretofore recorded only from the Maricopa and Colorado deserts.

The species inhabiting these hot and dry regions exhibit a

¹A map showing all the islands, etc., visited by this Expedition will be found in Vol. XII, No. 6, of these Proceedings, copies of which can be supplied at nominal cost.

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wonderful adjustment to their environment. The teguments are adapted to meet the demands against evaporation and to conserve the body fluids. This is secured by the manner in which the large mentum makes it possible to close the buccal aperture, and the interlocking of the last ventral segments and the lower margin of the epipleura at the elytral apex, especially in the Eurymetopini, practically sealing up the body against the drying effect of the desert.

During the time the expedition was in the field, 29 islands were visited and the following localities on the mainland either side of the Gulf: On the Sonoran coast; Guaymas, San Carlos Bay, San Pedro Bay, and Tepoca Bay; in Lower California; Gonzales Bay, Angeles Bay, Las Animas Bay, San Francisco Bay, Mulegé, Concepcion Bay, San Nicolas Bay, Loreto, Escondido Bay, Agua Verde and La Paz.

The following systematic report is here presented:

Family TENEBRIONIDÆ

EURYMETOPINI

1. *Metoponium laticolle* Casey

Easily recognized by its large size and greatly developed prothorax which is slightly wider than the elytra. In the female, the mesosternal epimera are coarsely punctured, in the male the punctures are mainly along the anterior border of these sclerites. First described from Arizona near Yuma. Length 6-8 mm. A series of 18 specimens was taken at Mulegé, May 14, and at Puerto Ballandra, Carmen Island, May 22.

2. *Metoponium candidum* Casey

Two specimens were taken at Guaymas, April 10. First described from specimens collected at Nogales, Arizona. It is known by its large size, parallel and convex form, and rather strong punctuation. Length 6-8 mm.

3. *Metoponium pacificum* Blaisdell, new species

Form oblong-oval, robust and strongly convex. Luster dull, color piceous black; antennæ and legs dark rufous.

Head slightly transverse, strongly and coarsely punctured, punctures discrete in the central area, becoming coarser and longitudinally coalescent laterally with formation of rugæ. Epistoma arcuato-truncate at apex, slightly notched laterally at the oblique sutures; mentum evenly convex. Eyes not prominent; sides of head rather evenly arcuate, converging slightly anteriorly. Antennæ rather stout.

Pronotum transverse, about a half wider than long; apex evenly and slightly sinuate in nearly circular arc; apical angles obtuse and distinct; base arcuate at middle, feebly bisinuate on each side; angles obtuse; sides rather broadly, not strongly, arcuate from base to apex, more strongly so anteriorly; disk rather evenly convex, rather coarsely and closely punctate, laterally the punctures coalescing to some extent; intervals forming feeble rugæ.

Elytra strongly convex, arcuately declivous posteriorly; punctures rather small, showing a more or less serial arrangement, becoming finely muricate laterally.

Beneath rather coarsely punctate; punctures shallow, those of the propleura large and deep, more or less coalescent, forming coarse longitudinal rugæ. Mesosternal epimera punctured like the episterna of the same segment. Abdomen less strongly punctured.

Legs rather short and stout; apical prolongation of the anterior tibiae stout and blunt. Described from the unique type.

The specimen, serving as the type, unfortunately is rather soiled and difficult to clean. It is distinct by its oval, convex and robust form. Length 7.2 mm.; width 3.5 mm.

Type: Female, No. 1104, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 4, 1921, at **La Paz, Lower California**.

4. *Metoponium angelicum* Blaisdell, new species

Form oblong-oval, stout, about $2\frac{1}{2}$ times longer than wide, rather more than moderately convex; sides slightly arcuate. Color, piceous black; antennæ and legs more or less dark rufous; under surface dark rufo-piceous. Surface shining.

Head about three-fifths as wide as pronotum; epistoma truncate; sides only moderately convergent from the prominent part of the eyes; frontal angles rounded; surface flattened, broadly and feebly impressed, coarsely punctured; punctures well separated, especially about the occipital smooth spot; laterally a few of the punctures show a tendency to coalesce, transversely so along the apical margin of the epistoma; labrum finely and sparsely punctured centrally and at base, coarsely so along the margins; each puncture with a small seta; supra-orbital carina rather strong. Antennæ slender and moderate in length.

Pronotum about a third wider than long, convex, slightly flattened at middle; apex slightly emarginate, angles obtuse and distinct; sides rather evenly but not strongly arcuate, less so anteriorly, marginal bead moderate; base feebly lobed at middle, slightly bisinuate laterally, mar-

ginal bead rather broad; basal angles obtuse and not in the least rounded; disk finely and sparsely punctate in central third, becoming coarsely so laterally, punctures more or less coalescent longitudinally; intervals rather convex and coarse, tending to form rugæ; each puncture with a small seta.

Elytra somewhat oval, truncate at base; humeri obtuse and not prominent; sides feebly arcuate, rather broadly rounded at apex; disk with closely placed series of moderately small, subequal punctures, those of the intervals rather more widely spaced; punctures slightly confused and setigerous laterally and on apex.

Propleura with very large rounded and shallow punctures, well separated, with the intervals feebly rugose; mesosternal episterna coarsely and sparsely punctured, the adjacent epimera dull and quite impunctate.

Abdominal segments finely and sparsely punctured along the middle third, punctures still sparse and slightly larger laterally.

Male rather narrower than female with the prothorax relatively slightly larger.

Length (types), 7.5-8.5 mm.; width 3.0-3.4 mm.

Nine specimens: Angeles Bay, May 7, J. C. Chamberlin; Shore of Las Animas Bay, May 8, E. P. Van Duzee.

In form, *angelica* resembles *convexicolle* Lec., but differs in the more or less polished surface. In *convexicolle* the punctation is denser and coalescent with formation of rugæ on the head; rugæ more evident on the sides of the pronotum and the abdominal punctation is a little coarser.

Type: Female, No. 1105, and *allotype*, male, No. 1106, Mus. Calif. Acad. Sci., collected May 7, 1921, at **Angeles Bay, Lower California**. Paratypes in the Academy collection and in that of the author.

5. *Telabis serrata* LeConte

Two specimens were secured on the mainland of Lower California, at Las Animas Bay, May 8, and at Angeles Bay May 7. *T. serrata* is pale testaceous in color, winged, and has the outer border of the anterior tibiæ distinctly serrate. It occurs at El Paso, Texas, and in New Mexico.

6. *Telabis punctulata* LeConte

In the female of *punctulata*, the fourth abdominal segment has a median porrect lobe at apex which extends to the middle of the last segment. Three specimens were secured, all apparently males, two being somewhat doubtfully referred to this species. The localities are: Loreto, May 20; Las Animas

Bay, May 8, and Pelican Island, at Keno Point, July 5. It was described from Lower California and Casey gives Cape San Lucas.

7. *Telabis hirtipes* Blaisdell, new species

Form oblong-subovate, a little wider posteriorly, moderately convex, slightly more than twice as wide as long. Color, piceous above, rufo-piceous beneath, antennæ and legs dark rufous; luster rather dull, slightly shining.

Head small, a little more than one-half the pronotal width; eyes prominent; sides of front converging and strongly arcuate from the eyes; surface broadly impressed between the antennal convexities, slightly prominent along the base of the epistoma; vertex feebly convex, closely and moderately coarsely punctate, punctures rounded and shallow, well separated in central area, becoming more or less coalescent laterally, reticulately so on the epistoma but discrete on the sides of the front; epistoma slightly advanced and truncate, notches shallow and broadly triangular; labrum very finely and sparsely punctured, with a row of coarse punctures along the margin. Antennæ moderate.

Pronotum about twice as wide as long, widest at middle, moderately strongly convex; apex broadly and moderately sinuate; marginal bead moderately thin, angles subacute and slightly prominent anteriorly; sides broadly and rather strongly arcuate, becoming broadly and feebly sinuate behind the apical angles and rather straight posteriorly; margin very narrowly and evenly impressed and obsoletely crenulate; base broadly arcuate in middle fifth, thence feebly sinuate to become slightly arcuate to the angles which are obtuse, distinct; marginal bead broad at middle; disk rather moderately densely punctate; punctures shallow, smaller and well separated in the central area, becoming larger and lunate (open posteriorly) and not noticeably coalescent, feebly muricate toward the margin.

Propleura longitudinally rugose, with sparse very large and shallow punctures intermixed; coxal convexities rugose.

Elytra obtuse, feebly emarginate at base, less than twice as long as wide; humeri obtuse and moderately rounded; base a little wider than the contiguous pronotal base; sides broadly and feebly arcuate, quite evenly and moderately broadly rounded at apex; disk quite evenly convex, finely, densely punctured, series more or less feebly outlined; feeble and vague longitudinal lines are seen when viewed from behind.

Mesosternal episterna very coarsely punctate, punctures very shallow; epimera impunctate except along the anterior margin. Metasternum and its side pieces not coarsely and very sparsely punctate. Abdomen finely and very sparsely punctate, sides of first segment also sparsely and a little more coarsely punctate.

Legs rather slender and rather less than moderate in length. Posterior face of the dilated outer angle of anterior tibiæ rather strongly concave; inner border rather thickly set with hair-like setæ toward apex. All punctures beneath setigerous, bearing rather long hairs. Described from the unique type.

Length (type) 7.5 mm.; width 3.5 mm.

Type: Female, No. 1107, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 13, 1921, on **Santa Inez Island, Gulf of California.**

Judging by Casey's table, *hirtipes* is related to *punctulata* Lec. In the latter species the female has a porrect lobe at middle of apex of the fourth abdominal segment which extends to the middle of the last segment. *Hirtipes* is finely muricate while *punctulata* is rather strongly so.

8. *Telabis lunulata* Blaisdell, new species

Form oblong-oval, about $2\frac{1}{2}$ times as long as wide, moderately convex. Color nigro-piceous above, rufo-piceous beneath, with the legs, antennæ and mouth-parts dark rufous. Luster dull, but feebly shining; surface microscopically granulate.

Head moderately small, rather strongly, broadly, transversely impressed between the antennal convexities; eyes prominent; sides arcuate to the frontal emarginations; epistoma truncate; supraorbital carina quite strong; punctures moderate in size, close, slightly less so in the central area and on vertex, scarcely coalescent laterally, those on the epistoma distinctly transversely coalescent; anterior margin of the punctures stronger and more prominent than the posterior. Antennæ moderate in length and rather slender. Labrum finely and sparsely punctate; punctures coarse and coalescent along the margins.

Pronotum transverse, about twice as wide as long, widest just behind the middle; apex evenly and moderately sinuate; apical angles distinct, obtuse, not prominent, very narrowly rounded; sides quite strongly and evenly arcuate, straighter and broadly but very feebly sinuate anteriorly to apical angles, straighter posteriorly to the basal angles; base moderately lobed at middle third, thence feebly and broadly sinuate and then feebly arcuate to the angles which are obtuse and distinct, marginal bead rather wide; disk rather strongly convex, briefly somewhat declivous along the basal margin in middle two-fourths, feebly impressed opposite the sinuations; punctures moderately large, closely crowded, but slightly separated centrally where the intervals are about one to three times the diameter of the punctures; punctures laterally slightly larger, not coalescent and open posteriorly.

Propleura not strongly longitudinally rugulose; punctures large, sparse and shallow.

Elytra scarcely twice as long as wide; base equal to pronotal base; humeri obtuse and not in the least prominent; sides slightly arcuate; apex rather evenly and broadly rounded; disk moderately convex, finely and irregularly punctate; series of very fine punctures faintly indicated; punctures finely subasperate with a few widely placed asperities on the apical declivity.

Mesosternal episterna rather sparsely punctured, punctures large and shallow; epimera smooth with a line of punctures along the anterior margin. Under surface sparsely and not strongly punctured. Abdominal punctures sparse, moderately small, somewhat evenly distributed, very little larger laterally; each puncture with an appressed hair.

Male rather more parallel than female.

Length (types) 6.4 to 6.8 mm.; width 2.8 to 3 mm.

Described from eight specimens. Ceralbo Island, June 7; Angeles Bay, May 7.

Type: Female, No. 1108, *allotype*, male, No. 1109, collected by E. P. Van Duzee, June 7, 1921, on Ceralbo Island, Gulf of California. Paratypes in my own collection and in that of the Academy.

According to Casey's table, *lunulata* belongs to the *punctulata* group. It differs from *punctulata* by the absence of the porrect lobe of the fourth abdominal segment in the female besides being less strongly punctured. In *hirtipes* the under surface is distinctly more pubescent and the pronotal disk is more evenly convex at base. In *lunulata* the pronotal disk while not obliquely and feebly prominent toward the basal angles is feebly, briefly and rather suddenly declivous along the basal margin, with feeble impressions opposite to the basal sinuations.

9. *Telabis latipennis* Blaisdell, new species

Form oblong-subovate, moderately convex and rather broad; color piceous above, rufo-piceous beneath; antennæ, mouth-parts and legs more or less dark rufous; surface rather shining.

Head relatively small, rather strongly transverse, broadly impressed between the antennal convexities; epistoma evenly convex and truncate at apex; eyes moderately prominent; sides convergent and feebly arcuate; supra-orbital carina rather strong; closely punctate, punctures moderately coarse and shallow, more or less separated on vertex; impunctate spot small; punctures denser laterally and more or less coalescent, those on the epistoma distinctly so between the transverse rugæ. Antennæ moderate in length and stoutness. Labrum finely and sparsely punctate, punctures coarser along the margin.

Pronotum transverse, widest at middle; about twice as wide as long; apex feebly sinuated in an almost circular arc, bead rather wide and flat; apical angles obtuse, distinct and not prominent; base three-eighths wider than apex, feebly trilobed, feebly and broadly sinuate at middle third, marginal bead broad and flat, narrowing outwardly to angles; the latter obtuse and slightly blunt; sides rather strongly arcuate at middle and basal third, straighter and convergent anteriorly; disk mod-

erately strongly and evenly convex, somewhat declivous toward apical angles, punctures moderately small, well defined, separated by a distance equal to one to three times their diameter, laterally coarser, less well defined, close, not coalescent and open posteriorly, denser at angles and close to margin, scarcely subasperate.

Propleura with very large shallow punctures which are well separated; surface feebly rugose, most so on the coxal convexities.

Elytra rather broadly oblong-oval, about a half longer than wide; humeri moderately distinct and rounded; base equal to the pronotal base; sides rather broadly and moderately arcuate, broadly rounded at apex; disk moderately convex; punctures moderately small and dense, subequal throughout, feebly asperate; closely placed series very feebly indicated; rather denser along the base, sides and apex; with the usual small very sparse asperities on apical declivity. A number of moderately long hairs about the humeri and along the epipleura.

Mesosternal episterna with large shallow punctures; epimera impunctate.

Abdomen finely sparsely punctured; surface more or less feebly rugulose, especially along the sides and on first segment; last two segments obliquely upturned to clasp the apical margin of the elytra in repose. Legs moderately long and stout; femora sparsely punctured, punctures with long hairs; outer margin of anterior tibiæ somewhat serrulate.

Length (type) 7 mm.; width 3.3 mm.

Type: Female, No. 1110, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 23, 1921, at **Marquer Bay, Carmen Island, Gulf of California.**

Latipennis, *hirtipes* and *lunulata* all belong to the *punctulata* section of the genus according to Casey's table of characters. It is also true that they bear a close resemblance to one another but appear to present sufficiently good characters for specific separation. *Latipennis* is broadly oblong-suboval, pronotum more strongly arcuate, widest at middle and more rapidly converging and straight anteriorly, sides of front less arcuate, nearly straight and convergent to the emargination; pronotal punctures not coalescent laterally, very distinct centrally; last two abdominal segments obliquely upturned in the female. *Hirtipes* is oblong-oval, the pronotal punctures are distinctly coalescent laterally; last two abdominal segments not upturned at apex in female. In *lunulata* the form is less stout, more elongate and narrower; the pronotal punctures are denser, less well defined, more asperate and scarcely at all coalescent; surface duller in luster and last abdominal segment not oblique.

TELAPONIUM Blaisdell, new genus

Body rather broadly oval, wingless; epistoma slightly produced as in *Telabis*, emarginations at the oblique sutures distinct; upper ridge of the mandibles sharp, lateral surface concave at base, not toothed above nor swollen at base; mentum transverse, large, hexagonal, apex distinctly but not deeply emarginate, surface convex; last joint of maxillary palpi scalene and very obliquely truncate at apex; last joint of labial palpi oval, flattened; antennæ long and slender, subglabrous, with the outer four joints slightly wider; ninth and tenth triangular, eleventh oval; eyes not prominent, coarsely faceted, feebly emarginate anteriorly, supra-orbital carina distinct. Scutellum well developed, slightly angulate and a little transverse; elytra moderately inflated and margined at base. Metasternum with ante-coxal transverse grooves and about as long as third abdominal segment. Protibiæ arcuate on external border at base, nearly parallel in middle two-fourths, widening rather suddenly at the external angle which is subacutely produced; external border spinose, spines short, blunt and rather wide. Tarsi elongate, with spiniform setæ beneath; first joint of metatarsi longer than fourth.

Telaponium occupies a position intermediate between *Telabis* and *Cryptadius* and can be recognized from both by the form of the last joint of the maxillary and labial palpi. In facies it resembles *Micromys ovipennis* Horn, especially in the female, and *Cryptadius inflatus* Lec. It differs distinctly from the former in the shape of the epistoma.

Type of genus *Telaponium castaneum* Blaisdell new species.

10. *Telaponium castaneum* Blaisdell, new species

Form rather broadly oval; elytra somewhat inflated, very convex, twice as long as wide and with a facies resembling a small *Cryptadius*. Color brown-castaneous, somewhat lighter beneath; punctures setigerous.

Head broadly and feebly impressed anteriorly, rather coarsely and closely punctate, punctures coalescent on front, intervals forming arcuate rugæ; on epistoma the punctures are crowded and the intervals very narrow; sides of front evenly arcuated and convergent to the emarginations; labrum slightly sinuate at middle. Antennæ extending to beyond pronotal base.

Pronotum transverse, about twice as wide as long, quite strongly convex, narrowly declivous along basal bead; apex broadly and not strongly sinuate, marginal bead rather wide, angles obtusely rounded and not in the least prominent anteriorly; base broadly and feebly arcuate, about a third wider than apex, marginal bead moderate; basal angles obtuse and moderately rounded; sides quite strongly arcuate and converging anteriorly, bead moderate and scarcely reflexed; disk coarsely punctate, punctures slightly elongate, strigose, more strongly so laterally; median line impunctate.

Elytra a little longer than wide, very convex and moderately inflated; base about equal to pronotal base, humeri broadly rounded; sides broadly and rather strongly arcuate to the subgigal apex; punctures small, submuricate, subserially arranged when viewed longitudinally, otherwise apparently irregular, most confused laterally and at apex; quite strongly convex antero-posteriorly.

Propleura longitudinally rugose. Prosternum with large shallow punctures; metasternum coarsely punctate, punctures deeper and rounded; mesosternal epimera very narrow within and the metasternal episternum more or less longitudinally rugulose. Abdomen very sparsely punctate, punctures shallow; sides of segments more or less rugulose. Under surface with scattered and rather long hairs; inner margins of the profemora sparsely ciliate.

Length (type) 4.3 mm.; width 2.1 mm.

San Nicolas Bay, May 16, two specimens taken from the dried pod of a wild cotton bush. A very interesting species differing mainly from the genus *Cryptadius* in the shape of the last joint of the maxillary and labial palpi.

Type: Male, No. 1111, and *paratype*, in Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 16, 1921, at San Nicolas Bay, Lower California.

11. *Cryptadius angulatus* Blaisdell, new species

Form oblong-oval, rather broad, twice as long as wide, widest at middle and strongly convex. Color dark piceous above, dark rufo-piceous beneath; legs and antennæ somewhat lighter; luster dull and alutaceous; surface microscopically granulate.

Head feebly and broadly impressed; sides arcuate before the eyes, frontal margin biemarginate; epistoma feebly arcuate, slightly advanced with apical margin narrowly deflexed; surface strongly punctate, punctures well separated on vertex and at base of epistoma, elsewhere more or less concentrically punctato-rugose; supraorbital carina strong. Eyes slightly prominent. Labrum transversely oblong, flat, finely and sparsely punctate. Antennæ moderately long and slender.

Pronotum twice as wide as long; apex feebly sinuate, apical angles subrectangular, narrowly rounded; base very feebly sinuate and one-fourth wider than apex; sides broadly and feebly arcuate, a little more strongly so anteriorly and only moderately convergent; basal angles obtuse and distinct; disk evenly convex from side to side, punctures rather small, slightly eroded, sparse centrally, discrete along apical and lateral margins, stronger and coalescent in lateral thirds where the intervals are convex and strong, tending to form rugæ. Propleura strongly and coarsely punctato-rugose.

Elytra about a third longer than wide, base equal to pronotal base; sides moderately and broadly arcuate, less so and more convergent in

apical third; apex rather narrowly rounded; punctures not strong, in feeble but evident series, intervals with single series, somewhat irregularly placed.

Mesosternal episterna coarsely, sparsely punctate, punctures variable in size. Epimera with a few scattered punctures. Metasternal antecoxal transverse grooves crenulate posteriorly.

Legs moderate; outer face of metatibiæ flattened, of the mesotibiæ grooved, edges spinulose; protibiæ more gradually widened apically, outer angle long, lateral edge somewhat arcuate and obsolete serrulate. Abdomen finely and sparsely punctate, punctures slightly more abundant on fifth segment.

Length (type) 7 mm.; width 3.6 mm.

Angulatus is narrower than *sinuatus*, the punctuation is less distinct and the basal angles of the pronotum are obtuse.

Type: Of doubtful sex, No. 1112, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 21, 1921, at **Puerto Ballandra, Carmen Island, Gulf of California.**

12. *Cryptadius sinuatus* Blaisdell, new species

Form oval, somewhat oblong, moderately broad, slightly more than twice as long as wide. Color piceous; antennæ rufous, luster dull.

Head feebly biimpressed, frontal margin feebly biemarginate; apex of epistoma feebly arcuate; punctures moderately coarse, lateral or anterior margin of each puncture thickened, coalescing to a moderate degree, forming rugæ that are slightly concentric to the central area where the punctures are more or less discrete; supraorbital carina strong; sides nearly straight and moderately convergent, becoming strongly rounded at the angle. Eyes moderately prominent. Antennæ moderate in length.

Pronotum transverse, about twice as wide as long; apex feebly sinuate nearly in circular arc; apical angles obtuse and distinct; sides evenly and moderately arcuately convergent anteriorly; base feebly trilobed; basal angles subacute and slightly prominent posteriorly; disk moderately and rather evenly convex, punctures moderately small, discrete centrally, becoming slightly coarser and more or less longitudinally coalescent laterally.

Propleura very coarsely punctate; intervals evident as rather coarse longitudinal rugæ. Punctures of prosternum coarse, rounded and separated.

Elytra rather more than a fourth longer than wide, rather strongly convex; base truncate and equal to the pronotal base; humeri obtuse; sides broadly and moderately arcuate, rather obliquely so in posterior third; apex ogival, narrowly rounded; punctures not dense, rather small in closely approximated series; less strongly marked on apical declivity which is gradually formed.

Mesosternal episterna punctate, punctures variable in size, large to moderate; epimera with a row of punctures along posterior margin,

with one or two on the disk. Abdomen moderately finely sparsely punctate, those at the sides of first segment scarcely larger; slightly denser at sides of fourth and on fifth segment.

Legs relatively slender. Protibiæ subparallel; lateral margin finely and irregularly serrulate; angle long, not wide and rather abruptly formed. Protarsi somewhat thickened.

Length (type) 7.8 mm.; width 3.8 mm.

Ballandra Bay, Carmen Island, May 21. *Sinuatus* is less broadly oval and the basal angles of the pronotum are subacute and slightly prominent posteriorly. In *angulatus* the basal angles are obtuse.

Type: Female, No. 1113, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 21, at **Puerto Ballandra, Carmen Island, Gulf of California.**

13. *Cryptadius tarsalis* Blaisdell, new species

Form less broadly oval than *angulatus* or *sinuatus*; oblong, about twice as long as wide, strongly convex. Color piceous black above and dark rufo-piceous beneath; slightly dull and rather alutaceous.

Head feebly and transversely impressed anteriorly; epistoma slightly produced and truncate, defined laterally by small emarginations; sides of front evenly arcuate to the epistoma; punctures coarse, discrete in a small area on front of vertex, elsewhere coalescent; intervals forming arcuate rugæ; punctures of epistoma dense, slightly smaller and transversely coalescent with the intervals very narrow. Antennæ quite slender, ninth and tenth joints triangular and slightly more prominent anteriorly than posteriorly; eleventh short oval, very little longer than wide.

Pronotum transverse, rather more than twice as wide as long; apex truncate in almost circular arc; angles rectangular, not rounded nor prominent; base subtruncate, fully a third wider than apex, very slightly arcuate at middle and scarcely sinuate laterally; basal angles subrectangular and not rounded; sides moderately convergent anteriorly, subparallel in basal half and more strongly arcuate anteriorly; disk discretely punctate at middle; punctures coarse and coalescent laterally; intervals rather coarsely longitudinally rugose.

Elytra short, oblong-oval, truncate at base; humeri obtuse, rather distinct but not in the least prominent; sides broadly and evenly arcuate to the parabolically rounded apex; disk with rather evident striæ of punctures laterally; punctures small, slightly muricato-asperate and more or less irregularly confused centrally.

Propleura coarsely rugoso-punctate; punctures not very distinct. Mesosternal episterna sparsely and very coarsely punctate, with a row of punctures along the epimera; the latter with a few much smaller punctures. Antero-lateral angle of metasternum impunctate. Abdominal

punctures rather small and sparse, a little larger laterally; closer and rather more abundant on fifth segment. Legs moderate in stoutness and length.

Length (type) 7.4 mm.; width 3 mm.

Type: Female, No. 1114, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 5, 1921 at **Angeles Bay, Lower California**. One paratype in collection of the author and one in that of the Academy.

The three species, *sinuatus*, *angulatus* and *tarsalis*, are referred to the genus *Cryptadius* for the reason that they are more in accord there than in the genera *Telabis* or *Metoponium*. The protibiæ are produced externally at tip, the frontal margin minutely biemarginate, epistoma truncate, body broadly oval, although a little less so than in *Cryptadius inflatus* Lec. In the latter species the basal angles of the pronotum are more or less rounded while in *sinuatus*, *angulatus* and *tarsalis*, these angles are distinct. LeConte does not define the pronotal angles in his original generic diagnosis. Casey had only *inflatus* and phases, with rounded basal angles, when he reviewed the genus. The genus *Cryptadius* as now extended will permit of the following synoptic statement :

- Basal angles of pronotum obtusely rounded (see Casey's Revision)*.....*inflatus* Lec. and its phases
- Basal angles distinct..... 1
- 1. Basal angles obtuse and narrowly rounded; labrum finely punctate; pronotal punctures less strong; mandibles feebly bifid at tip*angulatus* n. sp.
- Basal angles not in the least rounded..... 2
- 2 Basal angles subacute and slightly prominent posteriorly; body moderately broadly oval; labrum with rather coarse punctures along the margin.....*sinuatus* n. sp.
- Basal angles rectangular and subacute; body not broadly oval; labrum more abundantly punctate but less coarsely so along the margin.....*tarsalis* n. sp.

*A Revision of the American Components of the Tenebrionid Subfamily Tentyriinæ. (Proc. Wash. Acad. Science, Vol. IX, 1907.)

14. *Emmenides subdescalceatus* Blaisdell, new species

In *Emmenides* a peculiar and unique character is found in the feeble longitudinal elevation at each side of the elytral suture at the upper part of the apical declivity. The fifth ventral abdominal segment is modified at apex in the female. The

former character was observed by Col. Casey. The present species may be described as follows:

Form oblong, parallel, glabrous and shining, about $2\frac{1}{3}$ times longer than wide. Color, black with a slight piceous tint, more piceous beneath.

Head distinctly convex, very feebly, broadly and transversely impressed anteriorly; sides arcuately converging anteriorly, passing gradually into the arcuato-truncate apical margin; not very coarsely but deeply and rather closely punctate; punctures discrete centrally, confluent laterally and transversely so on the epistoma; intervals more or less longitudinally rugose; punctures smaller on the epistoma. Eyes more prominent than the sides of the front; supra-orbital carina short and not strong. Antennæ long and slender; joints elongate.

Pronotum about two-thirds wider than long, rather strongly convex; apex feebly sinuate; apical angles almost rectangular; sides broadly and evenly arcuate, rather strongly convergent anteriorly; base broadly arcuate in middle two-fourths, thence sinuate to the angles; the latter slightly obtuse and just a little rounded; disk densely punctate, punctures small, confluent laterally; intervals rather feebly longitudinally rugose.

Elytra oblong-oval, a little less than twice as long as wide, distinctly convex, moderately so antero-posteriorly; base subtruncate, somewhat arcuately rounded in lateral fourth, with the humeri obtuse and scarcely distinct; sides broadly but moderately arcuate; apex gradually and rather broadly parabolically rounded; disk abundantly and finely punctate; series feebly indicated; intervals very slightly convex on the apical declivity; subsutural elevations distinct when viewed from above in the plane of the declivity.

Propleura very sparsely punctate, punctures shallow and oval; longitudinal rugæ indicated. Abdomen sparsely punctate; punctures small. Legs rather densely punctate. Tarsi not densely pubescent beneath at apex.

Male: Rather narrower than the female. Fifth ventral segment rounded at apex.

Female: Rather broader. Fifth ventral rather broadly sinuato-truncate at apex.

Length (types) 8.5 to 9 mm.; width 3.3 to 3.8 mm.

A series of about 32 specimens was collected at Espiritu Santo Island, June 9; Ildefonso Island, May 17; and San Diego Island, May 27.

Type: Female, No. 1115, and *allotype*, male, No. 1116, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 9, 1921, on Espiritu Santo Island, Gulf of California. Paratypes in the Academy collection and in that of the author.

A small series of *punctatus* Lec., collected at Santa Rosa, Lower California, is before me. In these the tarsi are quite thickly pubescent beneath, the lateral surface of the pronotal

disk is less rugose and the punctures less confluent and not so elongate; the body is less convex and more parallel and the color more piceous. The fifth ventral segment in the female is briefly emarginate at apex and the edges of the emargination slightly bevelled, a character not mentioned by Horn or Casey.

15. *Emmenides apicalis* Blaisdell, new species

Similar in form to *subdescalceatus*, but less convex.

Head quite broadly sinuato-truncate at apex, rather short before the eyes; sides rather broadly arcuate and moderately convergent anteriorly. Eyes rather prominent.

Pronotum about two-thirds wider than long, widest slightly behind the middle; apex evenly and not deeply sinuate; angles subrectangular, scarcely rounded; sides quite evenly rounded, a little convergent anteriorly; base broadly arcuate at middle, sinuate laterally; angles obtuse and rather more than feebly rounded; disk rather more convex posteriorly, feebly impressed on each side along the situations, punctures small and sparse centrally, becoming longitudinally confluent laterally, with the intervals forming longitudinal rugæ; the latter not coarse; punctures in the vicinity of the basal angles each with a rather long yellowish hair.

Elytra nearly as in *subdescalceatus*, but less convex and rather gradually declivous posteriorly; parasutural elevations evident; humeri with a number of scattered hairs.

Propleura very coarsely punctured; punctures shallow and open anteriorly, their margins not very strong; surface rugose on the coxal convexities. Metasternal punctures coarse and moderately deep. Abdomen sparsely punctate; punctures not large; sides of the segment more or less rugose, punctures denser. Legs rather stout and moderately strongly sculptured.

Male: Fifth ventral segment broadly rounded and slightly truncate at middle.

Female: Fifth ventral segment strongly triangularly emarginate at apex; emargination equal to about two-fifths of the length of the segment; edges bevelled.

Length (types), 8 to 7.5 mm.; width 3.2 to 3 mm.

Ceralbo Island, seven specimens. The female type happens to be a little smaller than the male; a paratype of the same sex is about equal in size.

Type: Female, No. 1117, and *allotype*, male, No. 1118, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 7, 1921, on Ceralbo Island, Gulf of California. Paratypes in collection of the Academy and in that of the author.

Apicalis differs from *subdescalceatus* in its more shallow punctuation and much less convex form, besides the deep triangular emargination at apex of the fifth ventral segment of the female.

16. *Emmenides catalinæ* Blaisdell, new species

Similar in form, color and sculpturing to *subdescalceatus* and fully as convex.

Head rather more convex. Pronotum rather longer; sides a little more convergent anteriorly and in the type somewhat straighter in front of the middle; a paratype has the sides more evenly arcuate; apical angles rather obtuse to subrectangular and a little rounded; basal angles obtuse and narrowly rounded; disk rather densely punctate; punctures sparser in the central area than nearer the lateral margins, those along the margin have yellowish hairs. Otherwise as in *subdescalceatus*.

Propleura punctato-rugose; punctures coarse, shallow, open at both ends more or less; surface rugose on the coxal convexities. Metasternal punctures coarse and quite deep. Abdomen sparsely punctate, quite so at the sides of the first two segments; punctures denser and stronger on fourth and fifth segments; sides more or less rugulose. Legs rather stout.

Female: Fifth ventral segment with a small rounded emargination which is about as wide as deep with its anterior margin bevelled.

Length 9 mm.; width 3.6 mm.

Santa Catalina Island, June 12; two females.

Type: Female, No. 1119, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 12, 1921, on **Santa Catalina Island, Gulf of California**. Paratype in collection of the author.

Catalinæ is probably best separated by the form of the apical emargination of the fifth ventral segment of the female. In *apicalis* this emargination is largest and triangular; in *subdescalceatus* the fifth ventral is rather widely sinuato-truncate. In the male the same segment is broadly rounded at apex. In *punctatus* the fifth segment is very feebly sinuated and the surface feebly and rather transversely bevelled; the pygidium is triangularly prominent at middle posteriorly; in the male the fifth segment is broadly rounded at apex.

17. *Emmenides obsoletus* Blaisdell, new species

Obsoletus resembles some of the species of *Hylocrinus* rather than *Emmenides* but the frontal margin is not biemarginate and the tarsi are distinctly pubescent beneath. The

punctuation of the body beneath is quite shallow throughout and the fifth abdominal segment is less densely punctate; the angles of the pronotum are obtuse and slightly rounded; the form is less robust, more parallel and the elytra are less convex and are very gradually declivous posteriorly; the parasutural elevations are quite obsolete. The legs are rather slender.

The general sculpturing is the same as in *Emmenides* and differs only in degree that cannot be stated in words except as given above.

Three specimens are at hand, all collected at Marquer Bay, Carmen Island, May 23. All have the fifth ventral segment rounded at apex and sexual differences are not evident.

Length 7 mm.; width 2.9 mm.

Type: Sex undetermined, No. 1120, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 23, 1921, at **Marquer Bay, Carmen Island, Gulf of California**. Paratypes in the Academy collection and in that of the author.

A tentative synoptic table is presented below:

Parasutural elevations at summit of apical declivity distinct but not strong.....	1
Parasutural elevations obsolete; pronotal angles obtuse, basal slightly rounded; punctuation of under surface shallow; fifth ventral less densely punctate; sex doubtful; fifth ventral rounded at apex in specimens studied..... <i>obsoletus</i> n. sp.	
1. Fifth ventral segment in female quite deeply, triangularly emarginate at apex, in depth equal to about two-fifths the segmental length..... <i>apicalis</i> n. sp.	
Fifth ventral not deeply emarginate at apex.....	2
2. Fifth ventral segment in female subtruncate, very feebly emarginate at middle; adjacent surface more transversely bevelled; pronotal apical angles subacute..... <i>punctatus</i> Lec.	
Fifth ventral segment more distinctly emarginate.....	3
3. Fifth ventral in female truncate at apex, feebly and triangularly sinuate, sinuation as wide as deep..... <i>subdescalceatus</i> n. sp.	
Fifth ventral with the emargination as wide as deep and rounded at bottom, adjacent margin bevelled..... <i>catalinæ</i> n. sp.	

18. *Hylocrinus oblongulus* Casey

This species was described by Casey from specimens taken near San Diego, California. Eight specimens were secured by the Expedition, seven from the vicinity of Angeles

Bay, Lower California, and one from Lagoon Cove, Angel de la Guardia Island.

A large male measures 8 mm. in length and 3.5 in width. The form is elongate-oval and only moderately convex. The color is piceous to dark piceo-castaneous, beneath paler and more rufous; surface shining, luster somewhat dull. Head not strongly punctate, punctures shallow, sparse and discrete in middle area, becoming more or less coalescent laterally, intervals scarcely rugose. Pronotal disk not closely punctate in middle third where the punctures are small, becoming larger laterally, somewhat oval and more or less open posteriorly with the lateral margin of each prominent, otherwise the intervals are almost flat.

19. *Hylocrinus insularis* Blaisdell, new species

Form oblong-oval, parallel, moderately convex, about two and a third times longer than wide. Color piceous-black; beneath rufo-piceous; shining and glabrous.

Head very broadly and feebly impressed between the antennæ; punctures coarse, more or less coalescent in arcuate lines, discrete on the vertex and more evenly placed on the epistoma; the latter broadly truncate and at times feebly sinuate at apex; sides before the eyes evenly and rather broadly arcuate; supra-orbital carina not strong; eyes just a little more prominent than the sides of the front, not deeply emarginate. Antennæ long and slender, extending slightly beyond the pronotal base; ninth and tenth joints triangular and slightly longer than wide; eleventh obtusely oval and about a half longer than wide.

Pronotum about a half wider than long; apex not deeply sinuate in almost circular arc; angles subrectangular and blunt, not in the least prominent anteriorly; base arcuate in middle third, thence feebly and broadly sinuate to basal angles, the latter obtuse and moderately rounded; sides evenly, broadly and not strongly arcuate, moderately convergent anteriorly; disk rather evenly but not strongly convex, slightly and narrowly impressed at the basal situations; punctures well separated centrally, not very coarse, becoming more so laterally and coalescent; chiefly plicate in lateral fourth.

Elytra nearly twice as long as wide; base feebly sinuate at middle, becoming feebly and broadly arcuate laterally, equal to width of pronotal base; humeri obtusely rounded; sides not strongly but broadly arcuate to the subgival apex; disk with distinct striæ of small and unimpressed punctures, intervals flat with an irregular series of smaller punctures which may become confused at sides and on apex.

Propleura coarsely punctate; punctures shallow, more or less rugose on coxal convexities. Mesosternal epimera glabrous; twice as wide ex-

ternally as internally, with the posterior margin broadly sinuate. Punctures of under surface shallow. Abdomen glabrous and shining along the middle, duller laterally; punctures small, sparse and distinct centrally, slightly larger and more shallow laterally where the surface is more or less rugulose. Legs slender and moderate in length, with scattered short hairs. Metatarsi as long as the metatibiæ.

Male narrower than the female.

Length (types), 6 to 6.5 mm.; width 2.1 to 2.3.

Marquer Bay, Carmen Island, May 23, 19 specimens.

Type: Male, No. 1121, and *allotype*, female, No. 1122, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 23, 1921, at Marquer Bay, Carmen Island, Gulf of California. Paratypes in collection of the Academy and in that of the author.

Insularis is narrower, more parallel with denser integuments than *longulus* Lec. or *blaisdelli* Casey, and the pronotal punctures are larger and more distinct with the body more convex. These three species undoubtedly are closely related but recognizable. In *insularis* the right mandible has a feeble dorsal tooth.

20. *Hylocrinus magnus* Blaisdell, new species

Form oblong, elongate-oval, somewhat depressed and much larger than *insularis*, resembling *oblongulus* Casey, from the vicinity of San Diego, California. It is about $2\frac{1}{2}$ times longer than wide. Color, piceous-black, more rufo-piceous beneath.

Head similar to *insularis* but more strongly rugose, rugæ arcuate, with a small area of discrete punctures on the vertex.

Pronotum transverse, fully two-thirds wider than long; apex not very feebly sinuate; apical angles rectangular and distinct; base distinctly arcuate in middle third, broadly and rather strongly sinuate laterally; sides evenly, broadly and not strongly arcuate, slightly convergent anteriorly, marginal bead rather strong and reflexed; disk more densely and strongly but similarly sculptured as in *insularis*.

Elytra nearly as in *insularis*. More strongly sculptured; striæ slightly impressed; punctures of the intervals more irregular and rather confused at base, sides and apex.

Propleura strongly and very coarsely punctate, rugose; sterna coarsely punctate; mesosternal epimera coarsely punctate. Abdomen sparsely, strongly punctate, punctures not very small; surface more or less rugulose laterally. Legs somewhat stout and rather strongly sculptured. Described from the unique type.

Length 8 mm.; width 3.5 mm.

Type: Female?, No. 1123, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 10, 1921, at **Guaymas, Sonora, Mexico.**

In *magnus* the sculpturing is stronger and the mesosternal epimera are coarsely punctate, while in *insularis* they are glabrous and impunctate. In form and size *magnus* resembles *oblongulus* Casey. In the latter species the mesosternal epimera are quite impunctate and the sides of the pronotal disk is almost discretely punctate and scarcely rugose while it is very strongly rugose in *magnus*. *Piceus* Casey is shorter and broader. *Magnus* probably belongs to the subgenus *Loxodes*.

21. *Steriphanus subopacus* Horn

A long series of this species was collected at the following localities: Isla Partida, July 1 and 2, April 22; Patos Island, April 23; Sal si Puedes Island, May 9; San Pedro Nolasco Island, April 17; San Lorenzo Island, June 24.

These specimens show considerable variation not only from the different islands but from the same region. These variations appertain chiefly to the degree of punctuation and impression of the elytral striæ; all necessary intermediates are present and therefore races cannot be defined.

Subopacus is dull in luster, wingless and elongate-oval in form, and moderately convex. Head coarsely and densely punctate. Pronotum coarsely and moderately densely punctured, more densely so at the sides; wider than long, narrowed in front; apex emarginate and base truncate; sides feebly arcuate from the base, angles obtuse. Elytral striæ distinctly punctured; intervals flat and smooth. Abdomen not coarsely but moderately punctured. The type locality is Fort Grant, Arizona. Length 7.2 mm.; width 3.25 mm. The species of *Steriphanus* are difficult of separation.

22. *Steriphanus alutaceus* Casey

Casey in the Canadian Entomologist for April 1910, page 110, states that this species probably is a slight racial variation of *subopacus* Horn. *S. peropacus* Casey has the same status.

A series of 29 specimens of this species was collected at localities visited as follows: Guaymas, April 15; Puerto Refugio, Angel de la Guardia Island, May 1.

Casey states that the integuments of this insect are feebly shining, strongly alutaceous and opaque. Head with close, deep and not very coarse punctures, finer and more dense on the epistoma. Pronotal disk sparsely and extremely minutely punctured, rather coarse laterally. Elytra with very fine punctures, widely spaced in unimpressed series, slightly larger toward the sides; intervals sparsely and excessively minutely and irregularly punctulate. Length 7.8 mm.; width 3.28 mm. Type locality Tucson, Arizona.

23. *Steriphanus torpidus* Blaisdell, new species

Form oblong-oval almost equally rounded at each extremity; a little more than twice as long as wide. Color piceous black, slightly pruinose-piceous beneath; legs dark rufous; labrum, mouth parts and antennæ lighter rufous. Punctuation strong.

Head rather small, densely punctate; punctures rather coarse, more or less coalescent with a few discrete punctures on the vertex; frontal margin arcuato-truncate; labrum densely and rather coarsely punctate. Eyes not prominent. Antennæ long and slender, joints elongate.

Pronotum about a half wider than long, evenly convex; apex broadly emarginate in almost circular arc; angles subrectangular; base very feebly lobed at middle; very broadly and feebly sinuate laterally; basal angles slightly obtuse, nearly rectangular; sides broadly and rather evenly arcuate, a little more strongly so and convergent in anterior half; disk closely punctate, punctures discrete at middle, larger, stronger and coalescent laterally; intervals longitudinally rugose laterally.

Elytra rather evenly convex at sides and apex; base equal to the pronotal base; humeri obtuse and distinct; sides broadly and evenly arcuate to apical third, thence more strongly so to the rather ogival apex; disk with very distinct rows of somewhat large and closely placed punctures; intervals with very sparse punctules which are rather more abundant at base and sides; striæ and punctures almost obliterated at apex.

Propleura very coarsely and deeply punctate; lateral margin of the punctures more prominent than the medial and open anteriorly. Sterna very coarsely punctate. Mesosternal epimera impunctate and rather narrow medially. Abdomen very sparsely punctate, punctures small, more abundant apically, coarse and sparse laterally on first three segments. Legs moderately short.

Length 7 mm.; width 3.1 mm.

Type: Sex undetermined, No. 1124, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 20, 1921, on **San Esteban Island, Gulf of California.**

Torpidus should be easily recognized by its dull luster, convex form, very distinct elytral striæ of strong punctures, rufous mouth parts and antennæ and the peculiar punctuation of the propleura.

24. *Steriphanus tardus* Blaisdell, new species

Form fusiform-oval, nearly twice as long as wide, moderately strongly convex. Color piceous, a little more rufous beneath; legs dark rufous; surface feebly shining.

Head quite closely and coarsely punctate; punctures more or less discrete centrally, more or less coalescent laterally; those on the epistoma somewhat smaller, densely placed and coalescent; sides broadly and rather evenly arcuate with the sides of the epistoma, the latter sinuato-truncate; emarginations at the oblique sutures small. Eyes not prominent; antennæ slender and elongate, extending beyond the pronotal base, outer joints very slightly wider.

Pronotum nearly twice as wide as long; apex rather strongly emarginate in circular arc, about half as wide as the base, apical angles obtuse; sides evenly arcuate from base to apex and distinctly convergent anteriorly; base feebly arcuate in middle third, thence feebly and broadly sinuate to the basal angles, the latter rather obtuse and almost slightly prominent posteriorly; disk sparsely and not coarsely punctate in the central area, toward the sides the punctures gradually become coarser and coalescent; intervals rather longitudinally rugose.

Elytra about a half longer than wide; humeri distinct; base equal to the pronotal base; sides broadly arcuate to the rather narrowly rounded apex; disk with distinct rows of closely placed punctures; punctures not very large; intervals flat with irregular series of small punctules.

Propleura very coarsely punctate; punctures oval, open anteriorly with the arcuate edges prominent. Sterna coarsely punctate. Mesosternal epimera with two or three punctures. Transverse ante-coxal metasternal line with a row of coarse punctures along its posterior margin. Abdomen sparsely punctate; punctures small, discrete, distinctly defined and more abundant on fifth segment; punctures rather coarse and sparse on sides of the first and second segments. Legs moderate in length; profemora rather stout.

Length 7.5 mm.; width 3.5 mm.

Type: Sex undetermined, No. 1125, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, April 19, 1921, on **San Esteban Island, Gulf of California.**

Tardus is distinct in its fusiform outline and distinct punctation which is very coarse on the under surface of the body; the sides of the pronotum are distinctly and strongly convergent from base to apex. It evidently belongs very close to Casey's *conicicollis* which occurs in Arizona but the latter species is not fusiform in outline.

25. *Steriphanus mucronatus* Blaisdell, new species

Form elongate-oval, slightly more than twice as long as wide, moderately convex. Color dull black, dark piceous beneath; legs slightly rufous.

Head slightly convex, feebly impressed; epistoma slightly sinuate; sides of the front before the eyes rather strongly arcuate to the slightly evident oblique sutures; rather densely punctate, punctures moderate in size, somewhat discrete in the central area, elsewhere more or less coalescent; intervals not distinctly rugose; punctures of the epistoma smaller and dense, transversely coalescent. Labrum rather densely punctate, with a feeble median carina; apex feebly sinuate. Eyes feebly prominent. Antennæ long and slender, joints rather elongate.

Pronotum about a half wider than long; apex feebly sinuate in almost circular arc; apical angles obtusely rectangular and not in the least prominent; base feebly arcuate in middle third, thence broadly and feebly sinuate to the angles, the latter obtuse; sides rather strongly convergent anteriorly to apex, very moderately arcuate, bead moderate; disk strongly convex; punctures rather dense, smaller and discrete centrally, becoming slightly larger and rather elongate laterally where they are coalescent; intervals forming moderate longitudinal rugæ.

Elytra about a third longer than wide; base somewhat sinuate laterally, just a little wider than pronotal base, humeri obtuse; sides broadly arcuate to the rather broadly ogival apex; disk with distinct unimpressed striæ of rather strong, closely placed, punctures; intervals with sparsely distributed and very minute punctules.

Propleura coarsely rugoso-punctate; prosternum coarsely and discretely punctate; process very convex between the coxæ but upwardly reflexed and then briefly deflexed and more or less mucronate. Mesosternum and its episternum coarsely punctate; epimera quite impunctate. Metasternum coarsely and irregularly punctate as well as the episterna; transverse ante-coxal line with a row of punctures against its posterior edge. Abdomen sparsely punctate; punctures small throughout the central area; denser on fifth segment; a little larger and sparser on the sides of the first two segments. Legs moderate.

Length (type), 7.5 mm.; width 3.4 mm.

Freshwater Bay, Tiburon Island, three specimens.

Type: Sex undetermined, No. 1126, Mus. Calif. Acad. Sci., collected by Jos. R. Slevin, April 23, 1921, at Freshwater Bay,

Tiburon Island, Gulf of California. Paratypes in collection of the Academy and in that of the author.

In *mucronatus* the mentum is rather densely punctate and the punctures are transversely coalescent at apical third, with the intervals transversely rugose at that point; at the sides anteriorly there is a row of about three to five rather long setæ.

26. *Steriphanus durus* Blaisdell, new species

Form oblong-oval, strongly convex; slightly more than twice as long as wide. Color piceous-black; beneath dark rufo-piceous; legs dark rufous. Surface glabrous and shining.

Head densely and coarsely punctate; punctures shallow, more or less coalescent; intervals forming feeble rugæ that are more or less arcuate; small area on vertex with discrete punctures, those of the epistoma smaller and more or less transversely coalescent; front slightly convex, broadly and feebly impressed anteriorly; frontal margin arcuato-truncate; oblique sutures rather distinct. Eyes not prominent. Antennæ long and slender.

Pronotum scarcely a half wider than long, strongly convex; apex not strongly sinuate, in almost circular arc; apical angles narrowly rounded and subrectangular and not in the least prominent anteriorly; base about a third wider than apex, very feebly arcuate at middle, feebly and broadly sinuate laterally; basal angles subrectangular; sides evenly and rather feebly arcuate, moderately convergent anteriorly; disk evenly punctate in central area; punctures rather small and discrete, becoming gradually larger toward the sides, somewhat coalescent; lateral margin of each puncture forming an arcuate plicatule, scarcely forming longitudinal rugæ.

Elytra suboblong-oval, not wider than pronotum at point of greatest width; base equal to pronotal base; humeri obtuse and distinct, not in the least prominent; sides broadly and evenly arcuate to the subgival apex; disk with fine and distinct striæ of small punctures; intervals with a single irregular series of fine punctules which are more or less confused on apex.

Propleura with very large, shallow and elongate punctures which are open anteriorly, margins forming plicatules. Sterna coarsely punctate. Mesosternal epimera impunctate. Abdomen sparsely punctate; punctures rather large and rounded, distinctly defined, rather evenly distributed centrally, more abundant on fifth segment, larger at sides of first three segments. Legs moderately stout.

Length 6.9 mm.; width 3 mm.

Type: Sex undetermined, No. 1127, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, May 7, 1921, at **Angeles Bay, Lower California.**

Durus at first sight resembles *lubricans* Casey, from which it differs in the distinctly striate elytra, less densely punctured labrum, less arcuate sides of pronotum, plicatulate sides of the latter and larger, shallow and elongate punctures of the propleura. In *lubricans* the sides of the pronotal disk are longitudinally rugose. In *discrepans* Casey the propleural punctures are smaller, less evident between the rather coarse longitudinal rugæ. *Durus* also differs from any described here in the shining and glabrous integuments.

27. *Steriphanus estebani* Blaisdell, new species

Form oblong subfusiform-oval, a little more than twice as long as wide, moderately convex. Color piceous, beneath dark rufo-piceous; legs dark rufous; surface feebly shining, dull and rather alutaceous.

Head rather small, sparsely and discretely punctate in the central area; punctures not strong laterally, rather shallow, somewhat coalescent; intervals forming feeble arcuate rugæ; punctures of epistoma less dense and less coalescent than usual, scarcely at all rugose; labrum with rather closely placed and finer punctures; sides arcuate laterally; epistoma sinuato-truncate; punctures small and discrete on the sides before the eyes, the latter not prominent. Antennæ long and slender.

Pronotum about twice as wide as long, moderately and evenly convex; apex not strongly sinuate, in almost circular arc; angles rectangular and not in the least rounded; base at least a third wider than apex, rather feebly and broadly arcuate or very slightly sinuate laterally; basal angles quite rectangular, just the least rounded at tip; sides slightly and broadly arcuate, convergent anteriorly; disk finely and discretely punctate in central area from apex to base, the punctures becoming gradually slightly larger laterally; extreme sides longitudinally strigose where the punctures are scarcely evident.

Elytra at least three times as long and slightly wider than the pronotum; base equal to pronotal base; humeri obtuse and distinct; sides evenly and broadly arcuate to the parabolically rounded apex; disk with distinct striæ of small punctures, intervals with an irregular series of fine punctules which become more or less confused laterally and on the apex.

Propleura coarsely, subasperately sculptured, punctato-rugose; punctures rather coarse on the sterna, smaller and sparser on the side pieces. Abdomen sparsely and not coarsely punctate; punctures denser on fifth segment, noticeably a little coarser at the sides, especially on first segment. Legs moderate in length.

Length 7 mm.; width 3 mm.

San Esteban Island, two examples. A third specimen taken at Tepoca Bay, April 25, is doubtfully referred to this species.

Type: Male, No. 1128, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 20, 1921, at **San Esteban Island, Gulf of California.**

In *estebani* the punctuation of the under surface of the body is rather subasperate, not strong and somewhat shallow. The species is less convex than *durus*.

The species of *Steriphanus* resembles each other in general appearance but careful comparison without prejudice will determine that comparatively slight difference in sculpturing are constant in specimens from the same locality as from the different islands or from the mainland. While some of the species have been described from single specimens and may call forth a certain amount of criticism it will not change my opinion regarding their validity or the fact that I could not conscientiously consider them identical.

28. *Melanastus obscurus* Blaisdell, new species

Form oblong-oval, a little more than twice as long as wide, moderately strongly convex. Color black; beneath, antennæ, and legs, dark rufous.

Head slightly wider than one-half the width of the pronotum, moderately convex; broadly, feebly and transversely impressed between the sides of the front anterior to the eyes; sides evenly arcuate with the sides of the epistoma, the latter sinuato-truncate; rather evenly punctate; punctures moderate in size, well separated on front of vertex and at base of epistoma, laterally more or less longitudinally coalescent; intervals becoming feeble rugæ. Eyes not prominent. Antennæ extending to about the basal fifth of the pronotum.

Pronotum about a third wider than long, rather strongly convex; apex moderately sinuate; apical angles about rectangular, not in the least rounded; sides rather evenly and very feebly arcuate, more convergent anteriorly, marginal bead distinct and moderately strong; base arcuate in middle third, broadly sinuate laterally, a little wider than the apex; basal angles almost rectangular, narrowly rounded; disk sparsely punctate in middle third; punctures rather small, becoming gradually larger and longitudinally coalescent laterally; intervals forming longitudinal rugæ.

Elytra oblong-oval, scarcely twice as long as wide; base equal to pronotal base; humeri obtuse, distinct but not in the least prominent; sides feebly arcuate in basal two-thirds, thence more strongly arcuate to the sub-igival apex; disk with unimpressed striæ of fine and closely placed

punctures; intervals flat, finely sparsely and almost uniserially punctured; all punctures slightly stronger laterally; each interstitial puncture with a small recumbent pale hair.

Beneath very coarsely punctured, especially on the propleura. Abdominal punctures finer and sparser at middle, coarse and sparse on sides of first segment. Legs moderate in length and not stout.

Male narrower than female.

Length (types), 6.6-7.3 mm.; width 2.5-3.2 mm.

Guaymas, April 10, 12, and 13, nineteen specimens.

Type: Male, No. 1129, and *allotype*, female, No. 1130, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 10, 1921, at **Guaymas, Sonora, Mexico**. Paratypes in collection of the Academy and in that of the author.

Obscurus is separated from species of *Steriphanus* by the shorter and stouter antennæ, broadly arcuato-truncate and entire frontal margin; eighth antennal joint as long as wide, eyes emarginate. In *Steriphanus subopacus*, *alutaccous*, *durus* and *torpidus* the eighth antennal joint is distinctly elongate. This is the only species of *Melanastus* taken by the expedition. *Sonoricus* Casey taken near Colonia Garcia, Chihuahua, Mexico, is smaller and stouter. It may be considered hazardous to define a new species of *Melanastus* when there are so many of Casey's unknown to our collections but after a careful study of the present material I decided upon the present course.

TRIMYTINI

29. *Trimytis obtusa* Horn

A considerable series was taken at the following localities: Ceralbo Island, June 7; Puerto Ballandra, Carmen Island, May 21; Marquer Bay, Carmen Island, May 23; Espiritu Santo Island, June 9; Conception Bay (Coyote Bay), June 18. In this small species the pronotal angles are obtuse. It was described from Sierra Laguna. Three specimens are before me which were collected at Santa Rosa, Lower California.

30. *Trimytis (Pimalius) subsenilis* Blaisdell, new species

Form oval, slightly elongate, slightly more than twice as long as wide, strongly convex. Color piceous brown; an-

tennæ and under surface slightly rufous; dull in luster; each puncture with a short decurved, inconspicuous ashy hair.

Head strongly rugose; punctures coarse and elongate between the rugæ, which on each side of the head begin at the occiput and converge to the deep emargination between the lateral lobe of the side and base of the epistoma; the emargination about as deep as wide and rounded at bottom; epistomal lobe well developed, deflexed and arcuate at apex, edges dentato-crenulate, surface very deeply, coarsely punctate and reticulate apically, transversely rugose at base. Mandibles coarsely punctate above with a well developed porrect tooth. Lateral lobes of the front arcuate from the emargination, less so and divergent toward the eye. Antennæ rather stout; outer five joints somewhat compressed, tenth wider than long; eleventh slightly transversely oval.

Pronotum rather transversely oblong, base about a fifth wider than apex; strongly convex from side to side, feebly so antero-posteriorly; apex rather arcuate centrally, becoming slightly sinuate laterally within the slightly prominent and obtuse angles; sides evenly arcuate, rather convergent anteriorly; base broad and not strongly arcuate at middle, broadly so laterally; basal angles sharply rectangular and rather prominent posteriorly; disk regularly and rather coarsely punctate, punctures not strongly impressed; intervals tending to become longitudinally prominent apically and basally; laterally the punctures become coarser, not confluent, with the intervals raised and forming a reticulum.

Propleura and prosternum coarsely punctate; punctures of the former less impressed.

Elytra oblong-oval; base truncate, humeri obtusely rounded; sides evenly and not strongly arcuate, quite so in apical third; apex rather broadly rounded; disk rather abruptly arcuately declivous posteriorly, with rows of widely spaced punctures which are feebly impressed; intervals flat, very sparsely and irregularly punctulate.

Abdomen extremely sparsely and finely punctate; sutures impressed. Legs moderately short.

Length (type), 4.5 mm.; width 2 mm.

Guaymas, April 7, 8, and 15.

Type: Sex undetermined, No. 1131, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 7, 1921, at **Guaymas, Sonora, Mexico**. Paratypes in collection of the Academy and in that of the author.

In *obtusa* the head is feebly sculptured as compared with *subsenilis*. In the subgenus *Pimalius* Casey, the mandibles have a porrect dorsal tooth. Two species of *Trimyctis* (*obovata* Champ. and *flohri* Champ.) are given in the *Biologia* as occurring at Chihuahua City. It is stated that the former is closely related to *pruinosa* Lec., and the latter to *pulverea* Horn.

GENUS CHILOMETOPON HORN

Casey's definition of this genus may be quoted here on account of the somewhat doubtful relationship of the described species.

"Body elongate, convex, glabrous, winged; the metasternum with transverse grooves; eyes large, prominent and very feebly emarginate anteriorly; tarsi long, basal joint of the posterior variable; prothorax always narrowed toward base and widest before the middle. Last antennal joint elongate, sometimes extremely so." None of Casey's new species are at hand nor is *abnorme* Horn available. Three species that I refer to this genus are before me, each represented by a single specimen, one of which was collected on the Mohave Desert between Dagget and Needles. The following two seem to be undescribed:

31. *Chilometopon rugiceps* Blaisdell, new species

Form elongate-ovate, widest behind the middle, narrowing anteriorly, a little more than twice as long as wide. Color castaneous, feebly shining.

Head relatively small; epistoma abruptly lobed; sides converging and round at apex, surface more or less rugose; emarginations shallow and rounded at bottom, lateral lobes small and passing into the rather broadly arcuate sides of the front before the eyes; front broadly impressed between the supra-antennal convexities, the latter antero-posteriorly arcuate from the eye and continuing the upper plane of the mandible; surface rather evenly and closely punctate; punctures oval and discrete on vertex, becoming elongate anteriorly, the intervals raised into feeble longitudinal rugulae that stream and converge from the vertex and sides to the frontal emargination on each side; supra-orbital carina distinct; surface between it and the emargination quite impunctate. Eyes large and prominent. Antennae long and slender; terminal joint at least as long as the preceding three combined.

Pronotum rather more than twice as wide as long, quite evenly and moderately convex; apex broadly arcuate, sinuate laterally within the angles which are but slightly prominent anteriorly and obtuse; base arcuate at middle and broadly sinuate laterally to the angles, the latter rather sharply rectangular; sides broadly and rather strongly arcuate, somewhat straight and converging posteriorly to the angles; disk very slightly and broadly depressed in region of basal angles; punctures rather large, shallow and open posteriorly, larger laterally where the intervals are rather prominent but flat adjacent to the sides.

Elytra one-half longer than wide, somewhat oval, slightly widest behind the middle; base slightly emarginate in middle third; arcuate lat-

erally conforming to the pronotal base; humeri broadly exposed, rounded; sides broadly arcuated to apex, the latter obtusely rounded; disk moderately convex, not very strongly deflexed at sides, feebly prominent at humeri; punctures small, rather irregularly placed, series obscurely indicated.

Propleura coarsely punctate, the punctures round and shallow; coxal convexities glabrous and impunctate. Abdomen evenly convex, finely and sparsely punctured; each puncture with a small yellow seta; two rows of ambulatory setae are present, the terminal two setae of each series longer on fifth segment. Mesosternal episterna very coarsely punctured; epimera smooth and impunctate. Legs rather slender. Described from the unique type.

Length (type), 5 mm.; width 2 mm.

Type: Male, No. 1132, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 26, 1921, at Angeles Bay, Lower California.

Rugiceps agrees with *ensifer* Casey in the long terminal antennal joint in the male, the basal joint of the metatarsi, however, is but slightly longer than the fourth; the epistomal lobe is rounded as in *ensifer*, in *pallidum* Casey that lobe is arcuato-truncate and the basal metatarsal joint is as in *rugiceps*. These insects appear to be rare and no one seems perfectly sure regarding specific characters.

32. *Chilometopon cribricolle* Blaisdell, new species

Form similar to *rugiceps*, but slightly stouter and rather more convex. Color somewhat chestnut-brown; under surface slightly rufous; legs castaneous.

Head nearly as in *rugiceps*; epistomal lobe arcuato-truncate at apex; rather strongly convex, punctate, with a small impunctate area at middle of vertex. Eleventh antennal joint oval, about twice as long as wide.

Pronotum almost as in *rugiceps*, about twice as wide as long; apex slightly arcuate; angles obtuse and distinct; sides broadly arcuate; disk somewhat strongly declivous at apical angles, rather strongly punctate. A slight median line is present.

Elytra nearly as in *rugiceps*; punctures finely asperate, denser about base; irregular at base, along the suture, at sides and apex, but for the most part in closely placed series.

Propleura coarsely and rather strongly punctate; coxal convexities rugulose. Sterna punctured as in *rugiceps* but rather more strongly. Abdomen finely and sparsely punctate; punctures quite strong on last two segments.

Length (type), 5.3 mm.; width 2.4 mm.

San Nicolas Bay, May 16, J. C. Chamberlin.

Holotype, female, No. 1133, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, May 16, 1921, at **San Nicolas Bay, Lower California.**

EPITRAGINI

33. *Metopoloba densiventris* Casey

In Horn's list of the "Coleoptera of Baja California", *Epitragus pruinosus* Horn is listed as occurring in Texas, Arizona, southern California and San José del Cabo. In 1907, Col. Casey revised the "American Components of the Tenebrionid subfamily Tentyriinæ" and divided up the species quite extensively, and apparently separated what had previously been referred to *pruinosus* into several new species, none of which was mentioned as occurring in Lower California. Careful study of Col. Casey's views regarding the characterization of the phases related to Horn's *pruinosus* leaves much confusion in my mind as to the real status of the species. A series of eight specimens was collected by Mr. Van Duzee at the following places: Guaymas, April 10; San Carlos Bay, July 8, and Tiburon Island, July 4 and 5. In following Casey's tabulation of characters they apparently are to be considered as *densiventris* Casey, and *pruinosus* Horn appears to be separable from it. A large series from the different geographical regions are necessary to settle the confusion.

TRIOROPHINI

34. *Triorophus lævis* LeConte

A large series taken at Guaymas, April 10, on Georges Island, April 26, and Patos Island, April 23, answer to the specific definition of *lævis* Lec. The elytra series of punctures are obsolete only slightly behind the middle; the tenth antennal joint is quite as wide as long, the pronotal punctures are of one size, and the surface is shining. My large series is from the Colorado Desert and southwestern Arizona.

TRIPHALOPSIS Blaisdell, new genus

Type: Triphalopsis partida Blaisdell, new species

Epistomal lobe rather large and obtusely triangular; front of head strongly rugose; mandibles with a porrect dorsal tooth, smaller on left side, mandible not swollen at base, superior surface flat and about as wide as length of second antennal joint; at tip unequally bifid, upper lobe longer than the lower and smaller lobe. Eyes moderate in size, not prominent, moderately emarginate anteriorly by side of the front, scarcely transverse and coarsely faceted. Antennæ moderately long and slender. Body clothed with rather long hair which is fine and pale in color. Pronotum margined at sides. Elytra slightly inflated; series of punctures entire. Epipleura moderately narrow and gradually narrowing from base toward apex. Legs moderately short, rather slender; tarsi with coarse spiniform hairs which are closely placed at the apical margin of the joints beneath; first tarsal joint as long as the fourth. Body coarsely punctured beneath.

In color and pubescence it resembles at first sight *Amphidora littoralis*, but the elytra are more inflated and the form is more like *Triphalus cribricollis* Horn. The epistomal lobe is larger and longer than in *Triphalus* which it resembles in the coarse punctuation of the under surface; epipleura similar.

In *Oxygenodera* Casey, the facies is more like *Triorophus* and the apical angles of the pronotum are prolonged as in *Edrotes*.

In *Trichiotes* Casey, the epistomal lobe is as in *Micromes* Casey; the general form and sculpturing resembles *Triorophus* but it is sparingly clothed with long erect hair and the eyes are not emarginate anteriorly. There appears to be nothing like this new form mentioned in the *Biologia*.

Pescennius villosus Champ. is clothed with short yellowish decumbent hairs and is without close relationship with *Triphalopsis*; it is a member of the *Trimytini*.

Two species of *Triphalopsis* are apparently represented in the material before me and are to be characterized as follows:

35. *Triphalopsis partida* Blaisdell, new species

Form ovate; elytra somewhat inflated, resembling *Triphalus cribricollis* Horn, but sparsely clothed with rather long, soft hairs that are erect and decurved at tip. Color piceous brown; legs slightly rufous.

Head coarsely rugose, the rugæ on each lateral half begin at the occiput and converge anteriorly to the notch at base of the mandibles; rugæ long and strong, the sulci between with coarse elongate punctures; epistoma transversely rugose, at base of which and between the diverging rugæ of each side is a triangular punctate space; supra-orbital carina well developed and nearly attaining the mandibular base; supra-antennal convexity simply punctate, punctures moderate and not strong. Antennæ long and slender; third joint at least twice as long as second, third to fifth elongate, sixth to ninth distinctly longer than wide, tenth triangular and as long as wide.

Pronotum transversely oblong, strongly convex from side to side; apex truncate in circular arc; angles acute, small and feebly divergent; sides feebly and evenly arcuate and beaded; basal angles obtuse; base slightly arcuate and rather sinuate laterally; disk coarsely rugoso-punctate.

Elytra oval, strongly convex; base almost truncate and equal to pronotal base; humeri small, obtuse and not in the least prominent; sides broadly and moderately strongly arcuate; apex feebly lobed and moderately narrowly rounded; disk arcuately and abruptly declivous posteriorly; punctures moderate in size, arranged in close series, both striae and interstitial equal in size; striae punctures separated by a distance equal to their diameter; interstitial about twice as widely separated, scarcely confused at sides and on apex.

Under surface very coarsely punctate, quite densely so on the sterna; abdomen shining and more sparsely and less coarsely punctured; fifth segment comparatively small; fourth about one-half the length of third. Sexual characters not evident except that males are usually smaller.

Length (types), 5.3-6.3 mm.; width 1.9-3.2 mm.

A considerable series was taken at the following localities: Isla Partida, April 22; San Lorenzo Island, May 9; Freshwater Bay, Tiburon Island, April 23; Patos Island, April 23; and Mejia Island, April 30. A very interesting and easily recognized species.

Type: Female, No. 1134, and *allotype*, male, No. 1135, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 22, 1921, on Isla Partida, Gulf of California.

36. *Triphalopsis minor* Blaisdell, new species

Similar in form and sculpturing to *partida* but smaller and less strongly punctured; mandibles less strongly bifid; rugæ of front of head less coarse and not so strong on vertex; elytra rather less convex.

Length (types), 5.5-6.5 mm.; width 2.5-3 mm.

South Santa Inez Island, May 13, a good series; Pond Island and Pond Island Bay, Angel de la Guardia Island, July 1; Angeles Bay, May 5.

Type: Female, No. 1136, and *allotype*, male, No. 1137, collected by E. P. Van Duzee, May 13, 1921, on **South Santa Inez Island, Gulf of California**. Mus. Calif. Acad. Sci. Paratypes in the Academy collection and in that of the author.

It may be noted that the pronotal disk is less strongly punctured in the central area, the punctures being separated and the intervals flat.

37. *Triphalus subcylindricus* Blaisdell, new species

Form elongate-subcylindrical, scarcely inflated. Color piceous to nigro-piceous; legs slightly paler; shining, quite glabrous and not pubescent.

Head coarsely, closely and more or less confluent punctate; rather broadly impressed within the supra-antennal convexities; punctures on the epistoma more or less transversely coalescent; superior surface of the mandibles not strongly punctate. Antennæ long and slender.

Pronotum about a fourth wider than long; very strongly and cylindrically convex from side to side; base subequal to or slightly wider than apex, the latter truncate in circular arc; apical angles almost rectangular, not in the least prominent; sides feebly arcuate from base to apex, beaded; base feebly arcuated and beaded from angle to angle; basal angles obtuse and distinct; disk coarsely and more or less confluent punctate; intervals almost forming longitudinal rugæ. Scutellum forming part of the raised elytral base.

Elytra less than a half longer than wide, nearly evenly oval, cylindrical, not inflated, widest at middle; base very feebly emarginate and equal to pronotal base; humeri obtuse, small and distinct; sides broadly and evenly arcuate; apex rather broadly rounded; disk cylindrically convex, evenly and rather gradually arcuately declivous posteriorly, with nine discal, apically impressed, entire and regular rows of moderately large, closely spaced punctures; intervals with two series of widely spaced, slightly irregular, finely muricate punctules, each with a short inconspicuous hair.

Under surface very coarsely punctured. Males evidently narrower than females.

Length (types), 7-7.5 mm.; width 2.9-3 mm.

San Diego Island, May 27, two specimens; Ceralbo Island, June 6, two specimens.

Type: Male, No. 1138, and *allotype*, female, No. 1139, collected by E. P. Van Duzee, May 27, 1921, on **San Diego Island, Gulf of California**. Mus. Calif. Acad. Sci. One para-

type in collection of the Academy and one in that of the author.

Subcylindricus is more shining and the elytra are less coarsely punctate and not inflated. *Perforatus* Lec. is alutaceous in luster, elytra very coarsely and perforately punctate and more or less inflated, often widest behind the middle. Both *subcylindricus* and *perforatus* have very minute hairs arising from the punctures. *Cribricollis* Horn is rather shining with distinct sparse vestiture of longer (although short) suberect and somewhat coarse, fulvous hairs. Head densely punctato-strigose.

A specimen of *cribricollis* from San José del Cabo, Lower California, the type locality, is before me; also three specimens of *perforatus* Lec., one taken in the same region as *cribricollis*, the others at La Paz.

ORTHOSTIBIA Blaisdell, new genus

Type: Orthostibia frontalis Blaisdell, new species

Form nearly as in *Stibia*; epistomal lobe not deflexed, rather short and arcuate at apex; mandibles with a porrect dorsal tooth; tarsi spinose beneath, with apical spiniform hairs; first joint of metatarsi as long as third and fourth combined; eyes emarginate anteriorly; supra-antennal carina well developed; elytra oval, at most but feebly inflated. Intercoxal process of the abdomen moderate in width and truncate. Epipleura gradually narrowing from the humeri toward the apex, somewhat concave at base.

In *Stibia* the epistomal lobe is strongly deflexed, the line forming the upper margin of the deflexed portion continuous with the sides of the front when viewed from above.

In *Triphalus* the epistomal lobe is not deflexed, triangular, and at its sides obtusely dentate; pronotum cylindrical in form and basal joint of the metatarsi somewhat shorter than the fourth.

In *Micromes* the body is small in size; elytra with confused punctuation with the epistoma as in *Triphalus*. In *Trichiotes* and *Oxygonodera* the body is pubescent. *Orthostibia* is intermediate between *Stibia* and *Triphalus*.

38. *Orthostibia frontalis* Blaisdell, new species

Form elongate-ovate, a little more than twice as long as wide. Color black, alutaceous and feebly shining; antennæ and legs dark rufo-piceous.

Head feebly convex, epistoma noticeably so; front trilobed by the sides and epistoma, emarginations not deep, rounded at bottom; surface impressed within the supra-antennal convexities; coarsely punctate, punctures discrete, a little smaller on the epistoma and sides before the eyes, the latter emarginate and not prominent. Antennæ long and slender, extending beyond the pronotal base; joints elongate, ninth and tenth triangular, eleventh oval, about a half longer than wide.

Pronotum about a fourth wider than long, moderately convex; apex moderately and broadly emarginate; apical angles short, acute and anteriorly prominent; sides almost evenly and less than moderately arcuate, bead small; base equal to the apex, arcuate in middle three fourths, feebly sinuate laterally and extremely feebly impressed within the bead; basal angles obtuse and distinct; disk moderately coarsely punctate, punctures coarse laterally, rounded and discrete; intervals nearly flat.

Elytra oval; moderately strongly convex and arcuately declivous posteriorly, about two-thirds longer than wide; base feebly emarginate, equal to pronotal base; humeri obtuse, distinct and not in the least prominent; sides broadly and evenly arcuate, margin slightly reflexed apically; apex slightly lobed and moderately narrowly rounded; disk with regular series of rather coarse punctures, the latter separated by a distance equal to their width, slightly impressed laterally and on apical declivity; intervals flat on the dorsum, feebly convex laterally and on apex, first and second flat to apex, all with widely scattered extremely small punctules, each with a minute decumbent hair.

Beneath coarsely punctate; abdomen rather finely and sparsely punctate, punctures along base of first segment rather coarse, especially at the process. Legs moderately slender and not densely sculptured.

Length (types), 7-8.3 mm.; width 3.2-3.5 mm.

Espiritu Santo Island, 25 specimens.

Type: Female, No. 1140, and *allotype*, male, No. 1141, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 9, 1921, on Espiritu Santo Island, Gulf of California. Paratypes in Academy collection and in that of the author.

This interesting species appears sufficiently distinct from *Stibia* in the form of the epistomal lobe and the narrowly margined sides of the pronotum. All specimens and species referable to *Stibia* have a porrect dorsal mandibular tooth as in *Orthostibia*.

39. *Stibia puncticollis* Horn

A long series of this species was taken at the following localities: Loreto, May 20; Ceralbo Island, June 7; Monserrate Island, June 13 and San Carlos Bay, July 8.

This is the only species of *Stibia* taken on the main land of the peninsula by the expedition, and it answers the description given by Dr. Horn and repeated by Col. Casey: "Ferruginous-brown (to black), shining (to dull in luster); head coarsely confluent punctate; pronotal sides acute and not thickened." The mandibles in *Stibia* have a porrect dorsal tooth as Col. Casey surmised, at least all specimens I have seen or examined or referred to the genus *Stibia* have porrect dorsal mandibular teeth. These teeth are often very difficult to see when closely adducted against the sides of the labrum. The species cannot be referred to any other genus and several new ones are at hand.

40. *Stibia sparsa* Blaisdell, new species

Form elongate-ovate, resembling *Triorophus* at first sight. Color brownish ferruginous to black, shining and glabrous; antennæ almost rufous; legs rufo-piceous.

Head coarsely and almost discretely punctate; sides of front with base of the deflexed epistoma forming a distinct acutely rounded ridge; adjacent surface of the front strongly impressed, causing this region to resemble the clypeus of certain scarabæids. Antennæ long and slender, joints elongate.

Pronotum about a third wider than long, moderately strongly convex; apex feebly and evenly emarginate between the acutely rectangular apical angles; sides rather strongly arcuate, somewhat convergent toward the base and straight or very feebly sinuate, margin thickened and more or less obtusely rounded; base evidently slightly wider than the apex, broadly and feebly lobed in rather more than middle two-fourths, thence feebly sinuate to basal angles, marginal bead coarse and reflexed at the arcuation; basal angles obtuse; disk narrowly impressed along the thickened margin and linearly so within the basal bead; surface rather sparsely and not very coarsely punctate; punctures small, discrete and very sparse in region of apical angles.

Elytra quite evenly oval, scarcely twice as long as wide; base quite equal to the pronotal base, humeri obtuse, distinct, and not in the least prominent; sides evenly and broadly arcuate to the rather narrowly rounded and subogival apex; disk almost evenly convex from side to side, slightly flattened on dorsum with nine rows of strong punctures there and a short scutellar row of about three punctures; series feeble on extreme apex; intervals scarcely convex at sides and apex, with

widely scattered, extremely minute punctules, each bearing a decumbent, pale minute hair.

Propleura coarsely punctate, punctures shallow and well separated. Sterna and sides coarsely punctate. Abdomen with rather small punctures which are denser and coarser on fifth segment, fine and sparse at sides.

Male: First abdominal segment with a rounded pubescent fovea on base of intercoxal process.

Length (types), 8-8.5 mm.; width 2.9-3.5 mm.

A considerable series was collected at the following places: South Santa Inez Island, May 13; Angeles Bay, May 5 and 7; Sal si Puedes Island, May 9; San Lorenzo Island, June 24; Isla Partida, July 2; and Tortuga Island, May 11.

Type: Female, No. 1142, and *allotype*, male, No. 1143, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 13, 1921, on **South Santa Inez Island, Gulf of California**. Paratypes in Academy collection and in that of the author.

Specimens from Santa Inez Island and Angeles Bay are quite identical in all their characters while those from Isla Partida, San Lorenzo Island and Tortuga Island offer variations. At present I do not care to consider these variations as of varietal or specific value.

41. *Stibia granulata* Blaisdell, new species

Form elongate-subovate, slightly more than twice as long as wide; color opaque black; legs dark rufo-piceous; antennæ, palpi and tarsi rufous. Surface throughout microscopically granulate.

Head moderately coarsely punctate; punctures separate, quite evenly distributed; surface with minute asperities; sides of front and base of the deflexed epistoma quite strongly and obtusely rounded; adjacent surface transversely impressed. Antennæ long and slender; third joint twice as long as second.

Pronotum about a fourth wider than long, moderately and rather evenly convex; apex broadly emarginate, slightly oblique within the angles which are anteriorly prominent and acute; sides evenly and not strongly arcuate, slightly less so toward the angles, margin obtuse, not thickened; base arcuate and slightly lobed, rather broadly sinuate laterally, bead rather small; basal angles almost subacute; disk scarcely in the least impressed along the sides, densely punctate; punctures rather large and more or less confluent; a feeble median impunctate line indicated.

Elytra oval; base feebly emarginate, equal to pronotal base; humeri obtuse and almost distinct; sides broadly and evenly arcuate; apex rather narrowly rounded and subogival; disk moderately evenly convex, finely and minutely asperately granulate; striæ of small punctures obscurely indicated; intervals flat on dorsum, becoming obtusely and slightly convex laterally and on apical declivity where they appear feebly costulate when viewed from behind.

Propleura and sterna very coarsely and perforately punctate. Abdomen rather finely and sparsely punctate; punctures dense on fifth segment, coarse on intercoxal process; more or less corroded. Legs rather slender; anterior slightly thickened, more densely sculptured.

Length (type), 8.5 mm.; width 3.7 mm.

Santa Catalina Island, five specimens.

Type: Possibly a male, No. 1144, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 12, 1921, on **Santa Catalina Island, Gulf of California**. Paratypes in Academy collection and in that of the author.

A very distinct species. Easily recognized by the opaque integuments, microscopically granulate surface and coarse perforate punctures of the sterna. If the type is a male it is without an abdominal pubescent fovea.

42. *Stibia cribrata* Blaisdell, new species

Form elongate-ovate, a little more than twice as long as wide, not noticeably inflated. Color dull black; antennæ, palpi and legs dark rufous.

Head coarsely and strongly punctate; punctures quite discrete, slightly smaller on epistoma and supra-antennal convexities; raised base of the deflexed epistoma very obtusely convex; supra-orbital margin rather sharply reflexed; surface rather strongly impressed within the sides and carinæ, less so along the obsolete frontal suture. Antennæ slender and long, attaining the pronotal base; joints 3-8 elongate, eighth less so, ninth and tenth triangular, ninth scarcely as wide as long, tenth scarcely as long as wide, eleventh oval and evenly rounded at tip, ninth to eleventh moderately compressed. Eyes not prominent.

Pronotum about a fourth wider than long, evenly and moderately convex; apex feebly and broadly emarginate in almost circular arc; apical angles obtusely rounded and not prominent; sides moderately arcuate in middle three-fourths, thence sinuate to the angles, more broadly so posteriorly than anteriorly, margin sharp and slightly reflexed, especially posteriorly; base broadly and very moderately arcuate in middle three-fifths, thence sinuate to the angles, the latter acute and slightly prominent from the lateral and basal sinuations; disk coarsely and quite evenly punctate; punctures discrete; surface impressed along the sides and within the basal angles.

Elytra oval, about a half longer than wide; base feebly emarginate; humeri obtuse, scarcely distinct; sides broadly and rather strongly arcuate; apex rather narrowly rounded; disk rather evenly convex although slightly depressed on dorsum, with moderately impressed striæ of coarse, closely placed punctures; intervals convex, feebly so on dorsum near the suture, strongly so laterally and on apical declivity, becoming quite costulate, with extremely minute and very widely spaced punctules, each with a very minute hair; sutural interval flat to apex.

Beneath coarsely punctate; punctures on abdomen slightly less coarse and a little more sparse, denser on fifth segment. Legs moderate in length and slenderness, rather strongly sculptured.

Length (types), 7-7.5 mm.; width 3-3.5 mm.

Ildefonso Island, seventeen specimens.

Type: Female, No. 1145, and *allotype*, male, No. 1146, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, May 17, 1921, on **Ildefonso Island, Gulf of California**. Paratypes in the Academy collection and in that of the author.

Cribrata is recognized by the coarsely punctate elytra, impressed striæ and quite costulate elytral intervals. The sides of the pronotal disk are sinuate at the angles. The following synoptic table will aid in placing the species:

Lateral pronotal margin acute; not thickened; disk densely punctate; male without a pubescent fovea on first abdominal segment	1
Lateral pronotal margin distinctly thickened and obtuse; disk rather sparsely punctate; male with a pubescent fovea on first segment.....	<i>sparsa</i> n. sp.
1. Surface of body without raised microscopical granules.....	2
Surface of body with raised granules; apical angles of pronotum acute and anteriorly prominent; punctuation of elytra not distinct.....	<i>granulata</i> n. sp.
2. Elytra with impressed striæ of coarse punctures; intervals rather distinctly costulate laterally and apically; pronotal punctures discrete.....	<i>cribrata</i> n. sp.
Elytra with striæ of smaller punctures; intervals at sides and apex feebly subcostulate; pronotal punctures at sides more or less coalescent.....	<i>puncticollis</i> Horn

The surface luster is dull in *granulata* and *cribrata*; rather dull but feebly shining in *puncticollis* and polished and shining in *sparsa*. At first sight there is marked resemblance between *Orthostibia frontalis*, *Stibia puncticollis*, *granulata* and *cribrata*. *Orthostibia* is recognized by the form of the epistoma which is not deflexed.

EDROTINI

43. *Edrotes mexicanus* Blaisdell, new species

Form oval; quite resembling *Amphicyrta dentipes* Esch. Color black, legs slightly piceous; surface polished and shining beneath the indument. Pubescence long and quite sparse; each puncture with a hair.

Head coarsely and very sparsely punctate; supra-antennal convexities closely and coarsely punctate. Epistoma slightly arcuate at apex, angles distinct and narrowly rounded; transverse, sides rather deeply sinuate to receive the somewhat swollen base of the mandibles; surface with transverse rugæ, sparsely punctate; punctures large and small.

Pronotum sparsely punctate; punctures moderately small in the central three-fifths; laterally very coarsely punctate, punctures deeply impressed, intervals narrow and prominent; apical angles subacute.

Elytra rounded oval, scarcely longer than wide, strongly and arcuately declivous posteriorly; very sparsely and finely punctate; each puncture with a small rounded granule at its anterior border; hairs yellowish gray; inflexed sides with sparse, coarse and impressed punctures, each with an attending granule.

Propleura with very coarse punctures similar to those on sides of pronotal disk. Mesosternal episternum with very large, shallow punctures; epimera impunctate. Metasternal episterna very coarsely punctate, punctures more or less open posteriorly. Epipleura arcuately terminating opposite the middle of the metasternum; surface with distinct and slightly confused double row of coarse punctures. Legs moderate in length.

Length (types), 7-9 mm.; width 4.5-5.9 mm.

Guaymas, April 7 and 13; San Marcos Island, May 12; San Pedro Bay, July 7; Tepoca Bay, April 25; 23 specimens taken.

Type: Female, No. 1147, and *allotype*, male, No. 1148, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 7, 1921, at **Guaymas, Sonora, Mexico**.

The elytral pubescence is not lineate when viewed from behind.

44. *Edrotes asperatus* Blaisdell, new species

Form more robust, ovate. Color black; legs slightly piceous. Surface polished and shining beneath the indument. Pubescence long, abundant, nearly ashy in color.

Head very sparsely punctate; punctures small and equal; supra-antennal convexities not strongly punctate; punctures moderate and not strongly impressed. Epistoma arcuate at apex; angles narrowly rounded; sides broadly sinuated, about as long as wide; surface sparsely punctate and broadly tumid at base.

Pronotum finely and very sparsely punctate in the central three-fifths, in lateral fifths the punctures coarse and not strongly impressed; intervals not prominent; apical angles acute.

Elytra broadly oval, slightly inflated; arcuately and very strongly declivous posteriorly, very sparsely punctate; punctures very small, with a more or less noticeable granule anteriorly; inflexed sides very sparsely punctate; punctures slightly coarser than on the disk and moderately impressed.

Propleura moderately coarsely and very sparsely punctate; punctures rather larger than on the lateral fifth of pronotal disk. Prosternal process and mesosternum very coarsely rugoso-punctate and on the same plane. Mesosternal episterna very coarsely punctate; punctures rather impressed and open posteriorly; epimera impunctate, rather feebly asperulate. Metasternal episterna very coarsely punctate. Epipleura with two slightly confused rows of moderate punctures; terminating anteriorly opposite the anterior border of the metacoxæ. Abdomen very sparsely punctate; punctures rather small, more abundant on fourth and fifth segments.

Length (types), 10-12 mm.; width 5.5-6.5 mm.

Angeles Bay, three specimens.

Holotype, female, No. 1149, and *allotype*, male No. 1150 Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 7, 1921, at **Angeles Bay, Lower California**. Paratype in author's collection.

The species of *Edrotes* are robust convex insects, invested with conspicuous erect and long hairs; the pronotal apical angles are sharp, long, and therefore prominent anteriorly. There are more species than have been recognized and Casey was the first to determine this fact. These insects are covered with an exudate to which dirt adheres and which disguises the sculpturing, and the very good differential characters are not observed. They must be carefully cleaned with chloroform applied with a soft camel-hair brush.

CRANIOTINI

45. *Craniotus pubescens* Lec.

Two specimens of this very interesting species were taken on Isla Partida, April 22. It was known heretofore, only from the Maricopa desert of Arizona. A definite record is

La Puerta, Imperial Co., California, November 12. The finding of this species south of the Mexican boundary extends its range of distribution materially and may lead to a better knowledge of its lines of affinity. It is not as rare as it is believed to be. I have a series of five specimens in my own collection.

This genus is easily recognized "from all others of the tribe by the very prominent triangular lateral lobes of the head." (Horn).

ZOPHERINI

46. *Zopherodes tristis* LeConte

A single specimen was taken at Loreto, May 20. The species had previously been reported from the same region by Dr. Geo. Horn, in "The Coleoptera of Baja California". (Proc. Calif. Acad. Sci., Series 3, Vol. IV, p. 397, 1894.)

ANEPSIINI

47. *Anepsius confluens* Blaisdell, new species

Form oblong-oval, convex; width of pronotum and elytra quite equal; about two and a half times longer than wide. Color nigro-piceous to black; beneath piceo-rufous; antennæ and border of head ferruginous; lustre dull.

Head trapezoidal, not coarsely but rather closely punctate; punctures slightly denser laterally with a tendency to form a short carinule along side of each puncture; vertex slightly impressed, with punctures more widely spaced. Eyes completely divided; lobes elongate and parallel. Antennæ moderate in length and stoutness; joints nine and ten triangular, equal and as long as wide.

Pronotum about a third wider than long; evenly and moderately convex; apex subtruncate; sides broadly and evenly rounded, slightly more converging posteriorly; apical angles obtusely rounded; base scarcely truncate; basal angles small, rectangular, and rather acutely prominent; punctures of disk small, perforate and rather widely separated in central area; laterally slightly larger, more oval and longitudinally confluent; intervals rugiform and rather longitudinal.

Elytra less than twice as long as wide, oblong-oval, obtusely rounded at apex; sides distinctly and evenly arcuate; humeri obtusely rounded; disk evenly convex; punctures small, slightly quadrate, in close-set even series throughout, the alternate series toward sides developing carinules which become obsolete toward the suture.

Propleura finely rugulose. Abdomen shining and rather coarsely but somewhat sparsely punctate.

Length (type), 3.9 mm.; width 1.4 mm.

Isla Partida, April 22; Isla Raza, April 21; Mejia Island, April 20; Pond Island Bay, Angel de la Guardia Island, July 1; six samples studied, one, a paratype, was pale from immaturity.

Type: Sex undetermined, No. 1151, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 22, 1921, at **Isla Partida, Gulf of California.**

Confluens is very distinct in its acute basal pronotal angles from any congeneric species described from the United States. The genus is not mentioned in the *Biologia*.

48. *Anepsius angulatus* Blaisdell, new species

Similar in form to *confluens* but somewhat smaller and duller in lustre. Punctuation more shallow and not perforate.

Head quite evenly and closely punctured; slightly asperate, with very sparsely placed tuberculiform granules on the epistoma. Eyes completely divided.

Pronotum as in *confluens*. Punctures more evenly and closely placed in the central area, scarcely coalescent and with rather plicato-reticulate intervals; basal angles as in *confluens*.

Elytra with close-set series of very shallow punctures which become indistinct laterally between the linear carinules; each puncture with an appressed seta.

Under surface as in *confluens*.

Length (type), 3.5 mm.; width 1 mm.

Type: Sex undetermined, No. 1152, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, May 20, 1921, at **Loreto, Lower California.**

The single specimen taken differs from *confluens* in its sculpturing as given above. Both species agree in the shape of the basal angles of the pronotum and with certain species from the United States, in having the eyes completely divided. In all species from north of the Mexican boundary the basal angles of the pronotum are rounded. The eyes are divided by the prominent sides of the head into two elongate and equal parts, the upper is limited above by a projecting supraorbital ridge, the lower by the likewise prominent upper part of the gena.

CRYPTOGLOSSINI

49. *Centrioptera spiculifera* LeConte

This, the largest species of the genus, is quickly recognized by the well developed spiculæ at the sides and apical declivity of the elytra. The thorax is more or less obsoletely punctulate and smooth, the mentum coarsely punctured and convex at middle, mesosternum only slightly declivous as compared to the horizontal prosternal process; abdomen very sparsely and irregularly punctate, punctures very moderate in size and most abundant on fifth segment.

One specimen of this species was secured on Monserrate Island, June 13, and another was taken by J. C. Chamberlin on Espiritu Santo Island, May 31. It has previously been reported from San José del Cabo. A considerable series from Santa Rosa, Lower California, is before me. Both sexes are present in this material and show that the species is distinctly stouter and broader than *pectoralis* Blaisdell.

50. *Centrioptera pectoralis* Blaisdell

Recently described from specimens taken on San Benito Island off the west coast of Lower California. A series of six specimens, taken by Mr. Van Duzee and Mr. Chamberlin, appear identical with the type specimens. They were collected on the main land of Lower California at Loreto, May 20; Angeles Bay, May 5 and 7; Escondido Bay, May 24, and at Puerto Ballandra, Carmen Island, May 21. These localities occur between lat. 26 and 28, on the main land and on islands off both the western and eastern coasts. It evidently is a widely distributed species, differing from *spiculifera* in its elongate oblong form, smaller elytral spiculæ, more strongly declivous mesosternum and more abundant punctuation of the ventral surface.

51. *Centrioptera dulzuræ* Blaisdell

A single specimen of this common, although rarely collected species of southern California was taken at Angeles Bay, May 5. *Dulzuræ* is smaller in size than either *spiculifera* or *pectoralis*; the elytral spiculæ are rather less de-

veloped than in the latter species. In *pectoralis* the head is broader and the epistoma more broadly arcuate and more coarsely punctured. In all three species the punctuation of the under surface differs only in detail. *Dulzura* cannot be confused with the larger and more robust *spiculifera*. It is more closely allied with *pectoralis* and *chamberlini* (vidi infra).

52. *Centrioptera chamberlini* Blaisdell, new species

Form elongate-oblong. Color deep black, more or less shining.

Head rather broadly impressed between the anterior border of the eyes; epistomal surface distinctly and the front moderately convex; fronto-epistomal border rather broadly arcuate but noticeably slightly oblique and convergent at the sides in front of the eyes; central area with a few scattered punctures which become denser along the fronto-epistomal margin. Antennæ extending to the pronotal base. Mentum cordate, about as long as wide, coarsely punctate, feebly convex and obliquely impressed along the sides.

Pronotum a little wider than long; apex truncate between the oblique inner margin of the apical angles; the latter acute, anteriorly prominent and moderate in width; base truncate, equal to apex; sides broadly and evenly rounded, posteriorly convergent and rather feebly sinuate, becoming parallel for a short distance before the angles which are rectangular; disk moderately convex, slightly declivous antero-laterally, extremely sparsely and finely punctulate, glabrous and alutaceous.

Elytra oblong, about twice as long as wide; base truncate and equal to pronotal base; humeri obtuse, angle distinct; sides very feebly divergent posteriorly and feebly arcuate, more strongly rounded in apical third, apex broadly rounded; disk moderately flattened on dorsum and slightly convex, more strongly rounded at sides, rather abruptly and obliquely declivous at apex; punctures arranged in series centrally and simple, those of the intervals gradually developing into short spiculæ at sides and on apical declivity, spiculæ obsolete on sutural interval.

Propleura obsolete sculptured. Prosternal process strongly impressed along middle, rather coarsely rugoso-punctate. Prosternum anterior to coxæ obsolete rugoso-punctate. Mesosternum quite horizontal, vertical and rather prominent anteriorly and impressed at middle and strongly but not very densely punctate; bi-impressed posteriorly and impunctate. Parapleura very sparsely punctate; metasternum with a few scattered punctures and rugæ. Abdomen with few scattered punctures along middle third, a slightly increased number at sides, denser behind coxæ; third segment nearly impunctate, fifth sparsely and strongly punctate. Legs rather long and moderately stout.

Male: Abdomen slightly oblique to sterna and feebly flattened along middle third.

Female: Abdomen moderately convex, horizontal, very feebly flattened.

Length (types), 22-25 mm.; width 8.5 mm.

Sal si Puedes Island, May 9, J. C. Chamberlin, five specimens; San Lorenzo Island, May 9, J. C. Chamberlin, one specimen. The smaller specimen referred to this species, a male, has the mentum distinctly oval, slightly longer than wide. Large series are necessary for working out the relationships of the different phases.

Type: Female, No. 1153, and *allotype*, male, No. 1154, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, May 9, 1921, on Sal si Puedes Island, Gulf of California. Paratypes in collection of the Academy and in that of the author.

53. *Centrioptera seriata* LeConte

This species is easily recognized by the form of the prosteral process which is truncate and not extended behind the coxæ; sides and apical declivity of elytra scarcely spiculiferous. Three specimens were collected on Ceralbo Island, June 7, by Mr. Chamberlin and Mr. Van Duzee. Common on the mainland of Lower California. Specimens are before me that were collected at Santa Rosa and San Pedro, Lower California. Horn states that it is found in Arizona, Nevada and southern California besides San José del Cabo.

54. *Centrioptera sculptiventris* Blaisdell, new species

Form oblong-oval, subparallel. Color black, more or less dull throughout.

Head relatively large; fronto-epistomal border quite evenly arcuate from eye to eye, rather broadly impressed along the frontal suture; epistoma convexly prominent along median line, causing the frontal impression to appear deeper each side; front evenly and not strongly convex, obsoletely punctate, punctures quite strong on the epistoma and sides of the front before the eyes, sparse centrally. Antennæ moderate in length and stoutness, not incrassate.

Pronotum about a fourth wider than long; apex truncate between the oblique inner margins of the prominent and acute angles; base truncate, scarcely as wide as apex; sides broadly arcuate in anterior five-sixths, widest just in front of the middle, less arcuate posteriorly, broadly sinuate before the base where the sides become parallel for a short distance; basal angles rather sharply rectangular; disk moderately convex, rather strongly declivous at apical angles, to inner side of which is a feeble marginal impression, obsoletely and very finely punctate in a

broad central area, punctures becoming more distinct near the sides which are narrowly impressed along the margin, the impressed area punctato-rugose.

Elytra oblong, scarcely twice as long as wide, rather flat on dorsum; base truncate, equal to pronotal base; humeri obtuse, not in the least prominent; sides parallel, slightly and broadly arcuate, somewhat oblique in apical fourth, apex moderately broadly rounded; disk rather obliquely declivous in apical fourth, feebly convex on dorsum, rather broadly and evenly rounded at sides; striæ of punctures evident and simple in sutural areas, the interstitial series becoming gradually converted into short spiculæ at sides and on the apical declivity; sutural interval smooth throughout.

Propleura sparsely and rather coarsely punctured, sculpturing somewhat eroded. Prosternum not densely punctato-rugose, process flat, feebly impressed along middle. Parapleura and abdomen quite strongly and not very sparsely punctate. Mesosternum feebly declivous; vertical and rather prominent anteriorly, feebly impressed at middle of apex, angles slightly tuberculiform; surface rather closely punctate with an impunctate area posteriorly. Abdomen nearly evenly punctate on all segments; horizontal, rather flattened along middle third. Legs rather moderate in length and stoutness, rather densely sculptured.

Length (types), 22-24 mm.; width 8.5-8.8 mm.

San Pedro Bay, July 7, two specimens; Willard's Point Bay, Tiburon Island, July 3, J. C. Chamberlin; Isla Partida, May 3, Virgil Owen.

Type: Female, No. 1155, and *allotype*, male, No. 1156, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, July 7, at San Pedro Bay, Sonora, Mexico. One paratype in collection of the Academy and one in that of the author.

The four specimens studied agree in all particulars. Readily recognized by the strongly sculptured under surface. The intercoxal process of the first abdominal segment is coarsely rugose. The mentum is cordate and distinctly carinate at middle.

55. *Centrioptera asperata* Horn

A considerable series was taken at the following localities: Espiritu Santo Island, May 3; Loreto, May 20; Puerto Ballandra, Carmen Island, May 31; Ceralbo Island, June 7; San Diego Island, June 11. Typical *asperata* should have the mesosternum and metasternum on exactly the same plane, the elytra oval, flattened on the disk and ornamented with series of elevated tubercles, more or less acute on the disk, becoming acute but scarcely asperate posteriorly. I consider

that in typical specimens the bases of the tubercles become more or less continuous across the intervals. There are variations both as regards the tubercles and the mesosternal plane. A specimen is before me collected at La Paz. The type was taken by Mr. Gabb without definite locality. Horn names Cabo San Lucas in his "Coleoptera of Baja California".

56. *Centrioptera asperata discreta* Blaisdell, new variety

A good representation of this race was taken at the following places: Puerto Ballandra, Carmen Island, May 21; Coronados Island, May 18; San Diego Island, May 27; San José Island, May 23; San Francisco Island, May 30; Espiritu Santo Island, May 31 and Salinas Bay, Carmen Island, June 16.

Discreta has the form and general sculpturing of *asperata* only the tubercles are discrete, well defined, and in the intervals is a row of very widely spaced granules, more or less shining at tip; these may be very small or even tuberculiform. The sutural interval and an apical area are without tubercles as in *asperata*. The sides of the abdominal segments are apparently more densely punctured.

In both *asperata* and *discreta* the male has the first two abdominal segments moderately well impressed in the middle third, the impression broadly and indefinitely oval.

Length (types), 19-21 mm.; width 8-9.5 mm.

Type: Female, No. 1157, and *allotype*, male, No. 1158, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 16, 1921, at Salinas Bay, Carmen Island, Gulf of California. Paratypes in Academy collection and in that of the author.

57. *Centrioptera asperata subornata* Blaisdell, new variety

A moderate series of this race of *asperata* was taken by the expedition at the following points: Ceralbo Island, June 7; Santa Catalina Island, June 12; Monserrate Island, June 13; and at Escondido Bay, June 14.

The specimens agree in being slightly more elongate than typical *asperata*, in having the sculpturing much less developed, approaching *seriata* in this respect. In a broad discal area of the elytra the tubercles are obsolete and replaced by mod-

erately coarse punctures in rows, with an interstitial series of widely spaced similar punctures; at the sides the tubercles are more or less feebly developed and show a tendency of their bases to coalesce across the intervals.

Asperata and its races are similarly punctured beneath; propleura opaque, very sparsely and rather obsoletely punctured; punctures of the parasternal pieces smaller than on the mesosternum, metasternum and abdomen.

Length (types), 20-22.5 mm.; width 9-10 mm.

West Galleras Island near Monserrate Island, June 13, J. C. Chamberlin.

Type: Female, No. 1159, and *allotype*, male, No. 1160, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, June 13, 1921, on West Galleras Island, Gulf of California. Paratypes in Academy collection and in that of the author.

58. *Centrioptera asperata planata* Blaisdell, new variety

This race seems to be peculiar to Ildefonso Island where a moderately good series was taken by Mr. Virgil Owen and Mr. J. C. Chamberlin on May 17.

Planata differs from the previously defined races of *asperata* by its more elongate form. The sculpturing is less strong than in *discreta*. In typical *asperata* and in *discreta* the form is more robust and therefore less elongate and relatively broader. *Planata* is more distinctly sculptured than is *subornata*. Details of the variation in sculpturing cannot be stated for the ultimate description must come from large series of the various forms from all localities.

Length (types), 21 mm.; width 9 mm. The largest female measured 23 mm. in length and 9 mm. in width.

Type: Female, No. 1161, and *allotype*, male, No. 1162, Mus. Calif. Acad. Sci., collected by Virgil Owen, May 17, 1921, on Ildefonso Island, Gulf of California. Paratypes in collection of the Academy and in that of the author.

59. *Centrioptera variolosa* Horn

This species occurs abundantly in Arizona, the type having been taken at Fort Grant. Horn states that it occurs also at San Francisquito, Lower California. A very large series was

taken by the expedition, mostly under stones, at the following localities: Guaymas, April 11; Patos Island, April 23; south end of Tiburon Island, July 4; San Pedro Bay, July 7, and San Carlos Bay, July 8.

In *variolosa* the head and pronotum are very coarsely punctured. The mesosternum and metasternum are as in *asperata*. The elytra are sculptured with regular series of elevated smooth tubercles, becoming acute at sides and apex but not spiculiferous; the sutural intervals and apical area are feebly sculptured.

The number of species and the large series taken by the expedition warrant a synoptical statement of diagnostic characters at this time:

SYNOPTIC TABLE OF THE SPECIES OF CENTRIOPTERA MANN.

Elytra striato-punctate, not at all spiculiferous; prosternum produced behind the coxæ; hind thighs distinctly granulate within; thorax wider than long.....	<i>infausta</i> Lec.	
Elytra with series of more or less evident tubercles, becoming spiculate at sides and on apical declivity; hind thighs more or less denticulate or granulate within.....		1
1. Prosternum not produced behind the coxæ but truncate; elytra scarcely spiculiferous.....	<i>seriata</i> Lec.	
Prosternum produced behind the coxæ.....		2
2. Basal angles of pronotum distinctly everted, the lateral margin in front of them slightly reflexed; form more robust than usual.....	<i>angularis</i> Horn	
Basal angles not everted nor the margin reflexed.....		3
3. Head and pronotal disk very coarsely punctured; elytra with regular series of elevated smooth tubercles, slightly acute posteriorly but not spiculate.....	<i>variolosa</i> Horn	
Head and pronotum smooth with or without fine punctures in the central area and a few coarser punctures at the periphery or sides.....		4
4. Mesosternum and metasternum on exactly the same horizontal plane.....		5
Mesosternum and metasternum not on the same plane, the former more or less anteriorly declivous.....		6
5. Abdomen glabrous with a few widely scattered very small punctures; fifth ventral coarsely punctate; mentum coarsely punctate, subcarinate at middle and obliquely impressed laterally; form elongate.....	<i>chamberlini</i> n. sp.	
Abdomen sparsely and irregularly punctate; punctures rather coarse and of the same size throughout; mentum evenly convex and coarsely punctate.....	<i>asperata</i> Horn	
(a) Elytral tubercles coalescing at base across the intervals; form more robust.....	Var. <i>asperata</i> Horn	

- (b) Elytral tubercles discrete, distinctly separated; intervals with a series of small widely spaced granules; form similar.....Var. *discreta* n. var.
- (c) Elytra less strongly sculptured; central area serially punctate; tubercles not strongly developed.....Var. *subornata* n. var.
- (d) Elytra more strongly sculptured; tubercles discrete or coalescing at base across the intervals; form more elongate. Ildefonso Island.....Var. *planata* n. var.
6. Mesosternum strongly declivous; head coarsely and densely punctate; form more robust.....*texana* n. sp. 7
- Mesosternum only slightly anteriorly declivous..... 7
7. Elytra with strongly developed spiculæ at sides and on apical declivity; largest and most robust species....*spiculifera* Lec. Elytra with moderately developed spiculæ; more elongate species 8
8. Abdomen strongly and densely punctate at sides; mentum distinctly carinate and nearly smooth anteriorly..... 9
- Abdomen less strongly and rather sparsely punctate at sides.... 10
9. More densely and coarsely sculptured beneath, opaque..... *sculptiventris* n. sp. Less densely and less coarsely punctured beneath; more shining.....*muricata* Lec. 11
10. Pronotal lateral submarginal area obsoletely punctate..... 11
- Pronotal submarginal area more coarsely and distinctly punctate; discal convexity continuous even to marginal bead on each side; surface strongly shining and glabrous..... *utensis* Casey
11. Surface dull and alutaceous; abdomen with very few scattered small punctures, with a group of coarse punctures behind the metacoxæ and on fifth ventral segment; mentum less strongly and more sparsely punctate and obliquely impressed laterally.....*dulzura* Blais. Surface less dull and somewhat shining; abdominal punctures coarser and equal in size throughout and more abundant; mentum very coarsely and closely punctate....*pectoralis* Blais.

Infausta and *utensis* are the only two species not at hand. The interpolation of *utensis* into the above table has been purely guess work for no tangible and important character could be obtained from the original description.

60. *Cryptoglossa granulifera* Champion

Three specimens of a *Cryptoglossa* were taken by the expedition which are somewhat doubtfully referred to the above species. Two of these were taken on Isla Partida, June 26 and May 3 by Virgil Owen, the other on Mejia Island, May 3, by J. C. Chamberlin. These specimens answer so closely

to Champion's description of *granulifera* that I consider it unwise to separate them as a new species. Specimens of *granulifera* are not available and Champion's description is so poor in essential characters that it is best, for the present at least, to wait until material from the type locality can be obtained. It is an interesting species and in form resembles *Centrioptera angulata* Horn, but the eleventh antennal joint is short and transverse and the pronotal apex much less emarginate than in *angulata*.

ASIDINI

61. *Asida* (*Heterasida*) *connivens* LeConte

A single female of this species was obtained on Ceralbo Island, June 7, by Mr. J. C. Chamberlin. I have three specimens in my own collection for comparison. They were collected at San José del Cabo and represent both sexes. Two specimens of *Asida bifurca* Lec. show beyond all dispute that *connivens* is a distinct species and contradicts Horn's view that the latter is the male of the former. In *connivens* the basal angles of the pronotum are acute and divergent; the elytra have a sharp lateral margin inside of which is an acute costa which meets the acute margin at the humeri, and converge posteriorly to terminate near the suture about one third from apex; the marginal costa extends to within one-sixth of the apex.

62. *Asida* (*Asidina*) *parallela* LeConte

Three specimens taken on Isla Partida, April 22, cannot be separated from this species. They are distinctly larger and broader than specimens I have seen from the Colorado Desert but otherwise quite identical. Color brown; elytral margin acute, nearly reaching the apex; another short costa parallel with the margin and a short distance from it, extends through the middle two-thirds of the length of the elytra. Pronotal margin narrowly explanate and slightly reflexed. Length 17 mm., width 7.5 mm.

63. *Asida (Asidina) parallela terricola* Blaisdell, new variety

Form similar to *parallela* Lec., very slightly widest behind the middle, feebly inflated. Color dark brown. Punctures bearing minute setæ.

Head finely, not closely and subasperately punctate; front scarcely convex, impressed along the frontal suture; epistoma slightly convex, broadly sinuate at apex; sides of front before the eyes arcuately prominent, surface convex, border emarginate at the oblique sutures. Antennæ slender.

Pronotum quadrate; disk evenly and scarcely moderately convex, shining, finely and sparsely punctate; sides moderately and evenly arcuate, distinctly reflexed and asperate within; apex rather deeply and evenly emarginate; apical angles acute and anteriorly prominent; basal angles subacute and slightly prominent posteriorly; base scarcely arcuate and very slightly sinuate at the reflexed margin.

Elytra oval, parallel; sides slightly and evenly arcuate, rather obliquely so posteriorly; apex not broadly rounded; disk a little convex, arcuately declivous posteriorly; humeri obtuse, elytral base equal to the pronotal base; margin acute, feeble, terminating about an equal distance from both suture and apex; another short costa parallel and within the margin and a short distance from it, extending through the middle two-fourths of the length of the elytra; other lines are obsoletely indicated; surface finely asperate.

Under surface very finely and not closely punctured, finely asperate. Legs slender.

Length (type), 12.5 mm.; width 6 mm. Guaymas, one specimen.

Type: Female, No. 1163, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 10, 1921, at **Guaymas, Sonora, Mexico.**

Evidently related to *parallela* Lec. The single typical specimen is a female but it seems to be sufficiently distinct in its more slender legs, more convex body, and feeble elytral costæ, with other lines obsoletely indicated on each elytron, and the shining pronotal disk, to warrant placing it as a race. Both *parallela* and *terricola* are clothed with very short yellowish hairs or setæ. The antennæ are missing in the type, only a part of one remaining. A second female specimen collected on Santa Inez Island, May 13, is in all probability of the same species but showing some divergence. The pubescence is longer and the reflexed margin of the pronotum is feeble as are also the elytral costæ, the inner one of which is

obsolete. The divergence shown in this specimen leads away from *parallela* and strengthens the status of *terricola*.

64. *Asida (Asidopsis) divaricata* Blaisdell, new species

Form elongate, narrowed anteriorly, widest just behind the middle of the elytra. Color deep black, glabrous and shining.

Head short, punctures small and well separated, feebly impressed along the sutures; sides of front arcuate, not prominent, border emarginate at the oblique suture; sides of epistoma convergent, apex broadly and feebly sinuate. Antennæ short; eleventh joint rufous; outer three compressed.

Pronotum distinctly longer than wide; apex broadly and moderately deeply emarginate; apical angles acute and anteriorly prominent; sides broadly and not strongly arcuate, becoming rather deeply sinuate before the large divergent basal angles; margin thickened and crenato-rugose; base scarcely arcuate, wider than apex; basal angles subacute and markedly divaricate and prominent posteriorly; smooth; disk impunctate, moderately convex, somewhat declivous posteriorly, flattened within the apical angles.

Elytra elongate oval; base arcuate, oblique laterally to the obtuse humeri, adapted to the basal angles of the pronotum; sides moderately arcuate, rather oblique in posterior third and feebly sinuate before the apex, the latter rather broadly rounded; disk rather feebly convex on dorsum, gradually declivous at base, rather strongly rounded and inflexed at the sides, narrowly rounded and distinct at the humeri; arcuately declivous posteriorly; smooth and impunctate.

Abdomen impunctate, feebly rugose; propleura smooth, feebly rugose and obsoletely punctate anteriorly; sterna with a few small punctures; mesosternal episternum with a few rather coarse and distinct punctures. Legs long and very slender.

Length (type), 22.5 mm.; width 9.5 mm. Escondido Bay, one specimen.

Type: Sex unknown, No. 1164, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, June 14, 1921, at **Escondido Bay, Lower California**.

A unique and very distinct species related to *Asida macra* Horn. The polished black color, long prothorax with large basal divaricate angles, short antennæ and slender legs are very striking characters.

65. *Asida (Stethasida) granicollis* Blaisdell, new species

Form elongate oval. Color dull brownish black.

Head short and transverse, rather finely granulato-punctate, impressed on frontal suture; sides before eyes not prominent, feebly arcuate; emarginations feeble at the oblique sutures; epistoma broadly and feebly sinuate at apex. Antennæ short, moderately slender; eleventh joint pale.

Pronotum about a fourth wider than long; apex rather deeply and evenly emarginate; apical angles acute and anteriorly prominent; sides moderately arcuate, broadly sinuate in basal fourth, margin scarcely thickened or reflexed; basal angles subacute and slightly prominent posteriorly; base feebly and broadly arcuate, feebly sinuate within the angles; disk moderately convex centrally, somewhat impressed at the periphery, with discrete shining granules in central area and granulato-asperate at the periphery.

Elytra about four-sevenths longer than wide; base adapted to the pronotal base, slightly oblique at humeri, the latter obtuse; sides evenly and broadly arcuate to apex, the latter rather narrowly rounded; disk with a sharp and rather fine lateral margin which ends just before the apex; within this is a costa which joins the margin at about the junction of the basal and middle thirds, becoming parallel to the margin and terminating before the apex; a discal costa starting just behind the base and within the humeri passes backward, curving slightly toward the suture and before terminating runs parallel to the suture to top of the apical declivity; disk flat, obsoletely very sparsely and extremely finely granulato-punctate within the costæ, between the costæ with widely separated small granules; more or less rugulose at apex.

Beneath finely and not very densely punctate. Legs of moderate length and of very moderate stoutness.

Length (type), 16 mm.; width 7 mm. Guaymas, one specimen.

Type: Sex unknown, No. 1165, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 14, 1921, at **Guaymas, Sonora, Mexico.**

Granicollis does not answer to any of the species described in the *Biologia* and is quite different from any form north of the Mexican Boundary.

66. *Asida (Stethasida) catalinæ* Blaisdell, new species

Form oblong-oval, a little more than twice as long as wide. Color piceous and opaque.

Head short and transverse before the post-ocular line, feebly impressed on frontal suture; epistoma short and feebly sinuate at apex; sides before the eyes slightly prominent and acute to the very feeble sinuation at the oblique suture. Antennæ missing.

Pronotum about as long as wide; apex deeply and evenly emarginate between the acute and anteriorly prominent apical angles; sides broadly arcuate; base rather broadly sinuate laterally to the obtuse and very slightly posteriorly prominent basal angles; disk broad, evenly and slightly convex, sides narrowly explanate and reflexed, granulato-asperate.

Elytra rather oblong, about four-sevenths longer than wide; base rather emarginate; humeri obtuse and not in the least prominent; sides slightly diverging, at first almost straight, thence becoming rather broadly arcuate in apical two-thirds, apex moderately narrowly rounded; disk flat, arcuately declivous posteriorly; lateral margin distinct, slightly raised and rather coarse, on apical declivity passing arcuately toward the apex which it does not quite attain; with a costa parallel with the margin and a short distance from it extending through the middle two-fourths; there are slight evidences of two other lines on each elytron; surface granulato-asperate, especially on the lines where the pubescence is rather more abundant, giving a slight subvittate appearance.

Under surface finely and rather thickly punctate, each puncture with a short yellowish hair. Legs moderate in stoutness, the anterior noticeably thicker. Described from the unique type.

Length (type), 17 mm.; width 7.4 mm.

Type: Sex unknown, No. 1166, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, June 12, 1921, on **Catalina Island, Gulf of California**.

In the feebly vittate lines on the elytra it might be suggestive of *Asida subvittata* Horn to which it bears no close relationship. In general facies it points to *Asida obsoleta* Lec., from which it differs in the oblong elytra with flat disk and vittæ. It also appears quite different from any species given in the Biologia.

SCAURINÆ

67. *Argoporis inconstans* Horn

This species is peculiar in having a truncate epistoma and the posterior femora armed with a long slender tooth one-third from apex. Color piceous black, feebly shining to rather dull; legs rufous. The striation of the elytra varies; in some specimens the intervals are convex and near the apex costiform. In the male the tubercle on the first abdominal segment is rounded and may be triplicate. A large series was secured from the following localities: Isla Partida, April 22, July 1, 2, May 3, in rotten stems of *Cercus pringleyi*; Sal si Puedes Island, May 9; Las Animas Bay, May 8; Isla Raza, April 21.

A single male from Carmen Island is decidedly more opaque with the strial punctures strong and the intervals costate at apex. It was taken May 21, at Puerto Ballandra.

Length of largest specimen, 16 mm.; width 5.5 mm.

68. *Argoporis alutacea* Casey

Originally described from Arizona. In the collection made by the expedition are two males referable to this species; they were taken at San Pedro Bay and San Carlos Bay, Sonora, July 7th and 9th, respectively. Color piceous black; legs dark rufous; metafemora of male with a large bifid tooth the edges of which are finely denticulate.

69. *Argoporis labialis* Blaisdell, new species

Form parallel, elongate, rather depressed. Color piceous black, darker above; legs rufous, tibiae slightly darker.

Head about as long as wide, very finely and evenly punctate; epistoma convex, slightly produced at middle of apex, feebly sinuate each side; front feebly convex, longitudinally impressed within the antennal convexities and feebly along the frontal suture; sides before the eyes convergent and slightly reflexed. Antennae moderately stout, slightly incrassate, joints 8 to 10 transverse.

Pronotum slightly longer than wide; apex truncate, a little narrower than the base, the latter broadly and feebly emarginate; apical angles very obtuse; basal angles obtuse and distinct; sides broadly arcuate, convergent posteriorly; disk extremely finely and obsoletely punctulate.

Elytra about twice as long as wide, at middle just slightly wider than pronotum; humeri dentiform, very small; sides feebly arcuate, apex obtusely and rather broadly rounded; disk feebly convex on the dorsum, strongly and not broadly convex at sides, with rows of unimpressed and moderately large perforate punctures, these separated by a space equal to one to three times their diameters; intervals slightly convex, feebly costiform at apex.

Abdomen rather evenly punctate; punctures small. Legs moderate.

Male: Metafemora rather arcuate, swollen in distal third, with a short, stout, obtuse tooth, followed by three denticles, one of which is approximate to the tooth. Tubercle on first abdominal segment rounded, flat and feeble, with a short transverse impressed line anteriorly. Described from the unique type.

Length (type), 7.1 mm.; width 3.5 mm.

Type: Male, No. 1167, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, July 9, 1921, at San Carlos Bay, Sonora, Mexico.

Labialis apparently is distinct by the slightly lobed and bisinuate apical margin of the epistoma and the character of the femoral tooth. Another specimen taken at the same time and place is referred to *alutacca* Casey on account of the arcuate epistomal apex, the distinctly bifid femoral tooth, the edges of which are finely denticulate, and the stronger and raised tubercle on the first ventral segment.

70. *Argoporis æqualis* Blaisdell, new species

Form elongate, subparallel, slightly depressed. Color piceous black, legs dark rufous; surface rather dull, pronotum and head shining.

Head about as long as wide; epistoma broadly and slightly convex, apex arcuate; frontal and oblique sutures distinct, with the surface slightly impressed along the same; sides before the eyes distinctly convergent and very feebly arcuate; surface finely punctate, punctures denser laterally. Antennæ moderately slender; outer joints not distinctly transverse.

Pronotum about as long as wide; apex feebly arcuato-truncate; apical angles obtuse; base truncate in middle two-thirds, feebly and briefly sinuate laterally; sides broadly arcuate in anterior two-thirds, thence convergent and very feebly and broadly sinuate to base; basal angles subacute and slightly prominent posteriorly; disk moderately convex, glabrous, very feebly and sparsely punctate centrally, punctures becoming stronger and denser laterally.

Elytra about twice as long as wide, rather depressed; humeri very small and dentiform; sides feebly arcuate, more strongly so toward apex, the latter rather moderately broadly rounded; disk with regular striæ of small distinct punctures; intervals flat, becoming somewhat convex about apex, extremely minutely punctulate.

Abdomen very finely and rather sparsely punctate, somewhat longitudinally rugulose on first two segments. Legs moderate in length and rather slender.

Male: Metafemora moderately tumid in distal third; tooth rather long, slender and cylindrical; adjacent edge of femora denticulate. Inner edge of protibiæ distinctly denticulate. Tubercle of first abdominal segment at middle, rounded and narrowly transversely impressed at middle.

Length (types), 7-6.7 mm.; width 3.6-3.7 mm. An imperfect female measures 8 mm. in length.

San Pedro Nolasco Island, April 17, three specimens found under stones.

Type: Male, No. 1168, and *allotype*, female, No. 1169, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 17, 1921,

at San Pedro Nolasco Island, Gulf of California. Paratype in Academy collection.

The slender antennæ and peculiar elongate cylindrical femoral tooth seem sufficient to characterize *æqualis* as a distinct species.

71. *Argoporis longipes* Blaisdell, new species

Form elongate oblong-oval, rather stout, about three times as long as wide. Color dull black; antennæ and legs dark rufous.

Head about as long as wide, sides arcuate; epistoma feebly convex, impunctate, lobed at middle of apex and sinuate laterally; lobe obtusely rounded at apex; sutures distinct; front rather coarsely, irregularly, punctate. Eyes narrow, deeply and arcuately emarginate anteriorly by sides of the front. Antennæ unusually long, extending beyond the pronotal base, feebly incrassate.

Pronotum about as long as wide, widest anteriorly; apex very feebly arcuate centrally, scarcely sinuate laterally; apical angles obtuse, sides broadly and moderately strongly arcuate in anterior half, less so posteriorly, and feebly broadly sinuate and convergent to the angles, marginal bead rather thin and feeble; base broadly and feebly emarginate, bead rather broad and flat; basal angles rather rectangular and slightly subacute; disk rather strongly convex, impunctate and alutaceous; with an impressed median line and a feebly transverse impression in middle third, one-fifth from base.

Elytra rather oblong-oval, a little less than twice as long as wide; base broadly arcuate and equal to the pronotal base; scutellum transversely arcuato-triangular posteriorly, impunctate; humeri distinctly dentiform and slightly divergent; sides broadly arcuate, broadly sinuate opposite to apical declivity, apex rather broadly rounded; disk moderately convex, slightly flattened on dorsum and gradually declivous posteriorly, with nine rows of coarse perforate punctures on each elytron, punctures separated by a distance equal to one to three times their own diameter; intervals strongly convex, subcostiform, the sutural tumid at apex and ending abruptly before the apex; lateral three intervals flat near apex, seventh costiform to near the sutural.

Beneath nearly impunctate, dull in luster and alutaceous. Mesosternal episternum coarsely and densely punctate. Prosternal process compressed and cariniform at tip. Legs long; anterior longer than posterior; outer angle of protibiæ not produced.

Length (types), 17.5 mm.; width 5 mm. Escondido Bay, Lower California, June 14, two specimens.

Type: Sex not determined, No. 1170, Mus. Calif. Acad. Sci., collected by J. C. Chamberlin, June 14, 1921, at Escondido Bay, Lower California.

A paratype is smaller and has the anterior legs shorter. Whether or not these two specimens are the two sexes remains to be discovered as there are no tangible secondary sexual characters. Both antennæ are missing on the smaller specimen. *Longipes* is wonderfully distinct from anything heretofore described and a larger series may show the necessity of creating a new genus for its reception.

72. *Cerenopus concolor* LeConte

A very large series of this common species was taken at the following localities: Monserrate Island, May 24, June 23; Puerto Ballandra, Carmen Island, May 21 and 22; Loreto, May 19 and 20; San Francisco Island, May 30. The metafemora in the male are denticulate, one tooth slightly longer than the others, and the epistoma is prolonged and excavated beneath.

73. *Cerenopus cribratus* LeConte

A small series of specimens are referred to this species with some misgivings; they were collected by J. C. Chamberlin at the following places: Espiritu Santo Island, June 9; Agua Verde, May 26. In typical *cribratus* near the apex of the elytra the interspaces between the second and third and between the sixth and seventh rows of punctures are elevated and confluent, and form on each elytron a very prominent tubercle. These tubercles are not developed in the present specimens. The metafemora of the male are armed with a long acute tooth.

ELEODINI

74. *Eleodes inflata* Blaisdell, new species

Form robust, moderately inflated. Color deep black, more or less polished and shining.

Head feebly convex, sparsely and rather finely punctate.

Pronotum subquadrate, wider at anterior third, about a fourth wider than long; apex feebly sinuate between the moderately small, acute, anteriorly prominent angles; sides feebly arcuate, most so anteriorly, slightly converging posteriorly; base broadly and feebly arcuate; basal

angles obtuse, not in the least rounded; disk evenly and rather less than moderately convex, very sparsely and finely punctate.

Elytra more or less inflated in both sexes, base feebly emarginate, equal in width to pronotal base; humeri obtuse and distinct, not in the least prominent; sides more or less broadly arcuate; apex slightly produced and obtuse, slightly emarginate at the suture; disk strongly convex from side to side, feebly depressed on dorsum, distinctly striato-punctate, striæ not impressed, punctures small and rather closely placed in the series; intervals flat and extremely finely punctulate; punctures rather stronger and intervals feebly convex at sides and on apical declivity.

Prosternal process strongly punctato-rugose. Abdomen finely and very sparsely punctate. Legs moderately long; femora rather slender and not compressed.

Male: Rather less robust; abdomen feebly impressed along the middle.

Female: More robust; abdomen rather strongly and evenly convex.

Length (types), 21-25 mm.; width 7-10 mm.

Monserrate Island, May 25, seven specimens.

Type: Female, No. 1171, and *allotype*, male, No. 1172, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 25, 1921, at **Monserrate Island, Gulf of California**. Paratypes in Academy collection and in that of the author.

In the Revision of the Eleodiini (Bull. 63, U. S. Nat. Mus.), *inflata* was considered a form of *luæ*, the latter a subspecies of *eschsoltzi* Sol. This tentative decision was based on a very small number of specimens. Later studies on a larger number of specimens indicate conclusively that *inflata* is a distinct species related to *ventricosa* Lec., and forms an annectant group between the *eschsoltzi* and *ventricosa* constituents. At the time the monograph was written only females had been seen, since then both sexes have been examined. The males show no evidence of developing a cauda. The specimens taken by the expedition consist of five individuals from Monserrate Island, on the peninsular side of the Gulf, and two from the Sonoran side at San Pedro Bay. These latter are rather larger and duller in luster. The first specimens studied were from the region of San José del Cabo. For further remarks see Bulletin 63, page 292.

75. *Eleodes lorentensis* Blaisdell, new species

Form elongate oblong-oval, moderately stout. Color dull black, legs and under surface piceous; luster dull and rather alutaceous.

Head relatively small, feebly convex, finely and sparsely punctate. Antennæ moderate in length, not in the least incassate; joints subequal in length.

Pronotum subquadrate, widest at middle, about a sixth wider than long; apex moderately sinuate, transverse centrally and oblique within the angles; the latter dentiform, moderately large, subacute and more or less divergent; sides broadly and rather strongly arcuate, slightly sinuate just behind the apical angles; base broadly arcuate, basal angles obtuse and not in the least rounded; disk moderately and evenly convex, rather declivous antero-laterally, finely and very sparsely punctate, punctures very small.

Elytra oblong-oval, moderately strongly convex from side to side, although more or less depressed on dorsum; base feebly emarginate, equal and adapted to the pronotal base; humeri obtuse and not in the least prominent; sides broadly arcuate, rather obliquely convergent to apex in apical fourth; apex obtuse and rather narrowly rounded; disk more strongly rounded laterally, arcuately declivous apically; punctures small and distinct, arranged in series, subequal in size, those of the series separated by a distance equal to one to three times their diameter; interstitial series widely spaced; intervals flat; punctures slightly less regular laterally and apically.

Under surface strongly and very densely punctate, each puncture with a small ferruginous seta. Legs moderately long and strongly sculptured; densely and asperately punctured, each puncture with a slightly longer seta, these becoming more hair-like on the distal part of the tibiæ. All the femora armed with a strong tooth, moderately stout and compressed; tibiæ notably slender, especially basally where they are distinctly arcuate, straight in apical half.

Male: Rather narrower; sides rather less arcuate; abdomen broadly impressed in middle third on first three segments.

Female: Broader, slightly inflated; somewhat wider behind the middle; abdomen moderately convex.

Length (types), 26-24.5 mm.; width 9.5-10 mm.

Loreto, May 20, 13 specimens; Angeles Bay, two specimens. The extremes of the series measure: Length 19-26 mm.; width 7.5-11 mm. The pair from Angeles Bay are very robust, rather less strongly sculptured beneath but just as densely so, the femora are rather broader and the third antennal joint is relatively stouter, while distally relatively slender. This pair apparently represent a race.

Type: Female, No. 1173, and *allotype*, male, No. 1174, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 20, 1921, at Loreto, Lower California. Paratypes in Academy collection and in that of the author.

A very distinct species of the *armata* section of the true Eleodes; from the other members it differs in its dense sculpturing of the under surface, stout femora and opaque surface.

76. *Eleodes vanduzeei* Blaisdell, new species

Form robust oblong-oval, a little more than twice as long as wide. Color black, opaque; tarsi piceous; lustre dull alutaceous. Punctures not distinctly setigerous.

Head moderate; front evenly convex, finely and sparsely punctate, with impunctate areas on the epistoma. Antennæ comparatively short, relatively slender in distal half; third and fourth joints noticeably heavier.

Pronotum about as long as wide, widest just in front of the middle; apex moderately emarginate, transverse in middle three-fourths, oblique laterally within the angles; the latter acute, moderate in size and anteriorly prominent; sides broadly and moderately strongly arcuate, slightly less so posteriorly; base quite truncate; basal angles obtuse, not in the least rounded; disk evenly convex, slightly more declivous antero-laterally, finely and sparsely punctate.

Elytra oblong-oval, truncate at base which is equal and adapted to the pronotal base; humeri obtuse, distinct and not in the least prominent; sides broadly and moderately strongly arcuate, obliquely converging to apex in apical fourth; apex obtuse, narrowly rounded, feebly emarginate at the suture; disk strongly convex from side to side, slightly depressed on dorsum; striæ of small and distinct punctures which are not impressed and are separated by a distance equal to one or two times their diameter; intervals flat; interstitial punctures equal in size to those of the striæ, widely spaced, finely asperate on central part of disk and toward base; laterally and apically becoming gradually muricate and distinctly spiculiferous on extreme sides and apical declivity.

Under surface very densely and moderately finely punctate. Legs stout and moderate in length; femora moderately broad and compressed, all armed with a broad tooth and very densely punctured; tibiæ arcuate in basal half, straight in distal half and densely sculptured.

Male: Rather less broad; abdomen rather broadly impressed along the median line on first three segments.

Female: More robust; abdomen moderately and evenly convex.

Length (types), 22-26 mm.; width 8-11 mm.

Mulegé, May 14, 15, seven specimens.

Type: Female, No. 1175, and *allotype*, male, No. 1176, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 15, 1921, at **Mulegé, Lower California**. Paratypes in collection of the Academy and in that of the author.

A very distinct species and the only *Eleodes* known in which the interstitial punctures of the elytra become distinctly spiculiferous at the sides and on the apical declivity. I take great pleasure in naming this most interesting species after my friend Mr. E. P. Van Duzee.

77. *Eleodes* (*Promus*) *terricola* Blaisdell

Two specimens of this race of *insularis* Linell were taken by the expedition at Puerto Ballandara, Carmen Island, May 22. This race was previously referred to as the peninsular form of *insularis* in my monographic Revision of the Eleodiini (Bull. 63, U. S. Nat. Mus.). After seeing a larger series of specimens it was considered as a race of *insularis* as indicated above. It may again be defined as follows:

Body rather more convex than in *insularis*; elytral punctures stronger and the striæ more or less impressed, the intervals almost feebly convex. The tarsal spinules are ferruginous in *insularis* and darker in *terricola*.

The type of locality is El Taste, Lower California. Holotype, female, and allotype, male, in my own collection. This species has also been taken at San Francisquito, Lower California, by Mr. Gustav Beyer.

CONIONTINI

78. *Megasattus erosus* Horn

This large species was collected on Ceralbo Island, June 7. It has previously been taken at Patrocinio and Lower Purissima, Lower California. Six dead and imperfect specimens were picked up by the present expedition. In this species the elytra have a more or less sharp margin, the epipleura occupying only a part of the inflexed side; the latter is roughly sculptured. The sides of the pronotum are ciliate. The elytra are sculptured with coarse erosions and elevated smooth patches; longitudinal lines are more or less evident in some specimens.

In *costatus* Horn the elytra are costate and the intervals have fine smooth granules besides the punctures; sides of pronotum distinctly ciliate.

79. *Megasattus erosus manuelis* Blaisdell, new variety

Apparently this is a race of *erosus* Horn. Three specimens were secured on Espiritu Santo Island, May 31, by Mr. J. R. Slevin. The elytral margins are subacutely rounded; surface more polished and shining and the sculpturing much less strongly developed; the pronotal sides are not ciliate and the prosternal process is impunctate behind the coxæ. The head and pronotum are as in *erosus* Horn.

Three specimens were picked up dead and are more or less imperfect.

Length (types), 16-19 mm.; width 9.5-11.8 mm.

Type: Female, No. 1177, and *allotype*, Male, No. 1178, Mus. Calif. Acad. Sci., collected by Jos. R. Slevin, May 31, 1921, on Espiritu Santo Island, Gulf of California.

80. *Megasattus araneosus* Blaisdell, new species

Form oval, somewhat oblong. Color black and subopaque.

Head and pronotum finely and sparsely punctate; punctures denser towards the sides. Pronotal sides distinctly ciliate; disk narrowly explanate at sides; bead not strong.

Elytral margins obtuse; disk not costate; sculpturing somewhat obsolete at base and along the suture to about the middle; punctate, punctures impressed, becoming irregular erosions which are not deep between the rather smooth intervals; these intervals become reticulate, more densely and strongly sculptured along the margins and on the apical declivity; inflexed sides somewhat strongly punctate and scarcely asperate. The sculpturing not strong and is somewhat eroded.

Prosternal process finely, more or less densely, but distinctly punctate. Epipleura rather finely punctate.

Male: Narrower, sides more parallel.

Female: More oval, sides more arcuate.

Length (types), 14-15.5 mm.; width 7.5-9 mm.

South Santa Inez Island, nine specimens.

Type: Female, No. 1179, and *allotype*, male, No. 1180, Mus. Calif. Acad. Sci., collected by Jos. Chamberlin, May 13, 1921, at South Santa Inez Island, Gulf of California. Paratypes in Academy collection and in that of the author.

In a number of respects *araneosus* resembles *erosus* Horn, especially in the form of the head and pronotum; it differs, however, from the latter in the finely punctured prosternal process. The form also is less oval and the elytral sculp-

turing is not so strong and is not costate. All the specimens are imperfect, having been picked up dead or taken from spiders' webs. A female specimen has the elytra somewhat polished and the sculpturing is less coarse and more punctato-rugose. In most of the specimens the marginal cilia of the pronotum has been lost but enough remain to show that the margin is distinctly ciliate.

81. *Megasattus læviventris* Blaisdell, new species

Form, large, oblong to oval, quite strongly convex. Color deep black, surface polished, luster shining.

Head obsoletely, finely and sparsely punctate. Antennæ distinctly compressed; tenth joint transverse.

Pronotum strongly convex, impunctate except laterally along the rather narrowly explanate sides where the punctures are small and granulate; marginal bead strong; sides not ciliate.

Elytra oblong to oblong-oval, moderately strongly convex; lateral margins acutely rounded and very distinct; surface pitted with numerous more or less deep depressions which are larger and more or less coalescent at middle of the sides; intervals forming more or less wide, smooth, elevated patches or reticulations, which are much less coarse to somewhat obsolete toward base, along the suture and on the apical declivity; sutural interval smooth, impunctate and entire. In the smooth areas the punctures are more evident and sparse; inflexed sides obsoletely sculptured or smooth.

Propleura glabrous and longitudinally rugose as usual. No evidence of cilia. Abdomen, sternal sclerites and epipleura impunctate. Legs moderately long and relatively slender.

Male: Oblong-oval; sides parallel, less than moderately arcuate.

Female: Broadly oval, slightly widest behind the middle; sides more strongly arcuate.

Length (types), 18.5 mm.; width 11-12 mm.

Two specimens of this large and interesting species were collected on Santa Cruz Island, and at Escondido Bay. They are in a good state of preservation.

Type: Female, No. 1181, Mus. Calif. Acad. Sci., collected by I. M. Johnston, June 11, 1921, on **Santa Cruz Island, Gulf of California**; *Allotype*, male, No. 1182, collected by Jos. C. Chamberlin, June 14, 1921, at Escondido Bay, Lower California.

82. *Megasattus sternalis* Blaisdell, new species

Form oblong-oval to suboblong-oval and moderately strongly convex. Color deep black; lustre more or less shining; surface more or less polished.

Head finely and densely punctate; distinctly, transversely and rather broadly impressed between the anterior borders of the eyes along the frontal suture. Antennæ compressed as usual; eleventh joint distinctly smaller than the preceding joints.

Pronotum distinctly twice as wide as long; apex rather deeply sinuate between the narrowly rounded and slightly prominent anterior angles; base broadly arcuate in middle two-fourths, thence rather deeply and broadly sinuate to tip of basal angles which are produced posteriorly and subacute; sides rather broadly and rather strongly arcuate anteriorly, nearly straight and parallel posteriorly, posterior angles not at all divergent; disk moderately convex, finely and strongly punctate, punctures smaller centrally, becoming larger laterally; surface impressed along the lateral margins, narrowly anteriorly, widening posteriorly and involving the angles; impressed area finely granulato-punctate.

Elytra moderately convex and strongly sculptured, with numerous pits which are of moderate size, irregular in form and opaque at bottom between the smooth, rather wide, reticulated intervals; sutural interval strongly sculptured; lateral margin more or less obtusely rounded and the inflexed sides strongly sculptured; no evidence of costæ.

Propleura coarsely and strongly longitudinally rugose; distinctly ciliate beneath the marginal bead. Sterna and side pieces rather finely and densely punctate. Prosternal process strongly sculptured. Abdomen finely, rather sparsely punctate; punctures noticeably larger at sides of first segment; surface somewhat rugulose. Legs moderate in length and stoutness.

Male: Oblong-oval; sides parallel; elytra more strongly sculptured.

Female: More oval; slightly inflated and slightly widest behind the middle; sides arcuate; pronotal sides somewhat convergent to apex.

Length (types), 12.5-14 mm.; width 6.5-8.5 mm.

Type: Female, No. 1183, and *allotype*, male, No. 1184, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, May 7, 1921, at Angeles Bay, Lower California.

Sternalis is quite distinct from the previously described species and the differential characters probably can best be summarized in a revised synoptic statement:

Prosternal process distinctly punctate behind the coxæ; pronotal sides ciliate.....	1
Prosternal process not punctate nor margined behind the coxæ.....	2
1. Elytral sculpturing strongly developed throughout; lateral edge obtusely rounded.....	<i>sternalis</i> n. sp.
Elytral sculpturing eroded and less strongly developed; lateral edge acutely rounded.....	<i>araneosus</i> n. sp.

- 2. Pronotal sides ciliate..... 3
 Pronotal sides not ciliate; abdomen and inflexed sides of elytra
 obsoletely sculptured and glabrous.....*læviventris* n. sp.
- 3. Elytra distinctly costate with interstitial smooth granules and
 punctures.....*costatus* Horn
 Elytra not distinctly costate, although longitudinal lines may be
 present; larger species..... 4
- 4. Sculpturing strongly developed, longitudinal lines more or less
 evident; elytral margin acutely rounded and prominent; adjacent
 surface rather distinctly explanate.....*erosus* Horn
 Sculpturing less developed; surface more polished and shining
 *manuelis* n. var.

In all the elytra have a distinct lateral margin, the epipleura forming only a part of the inflexed sides. In many of the specimens studied the pronotal cilia have for the most part been rubbed or broken off, but stubs and punctures remaining to indicate their reality.

83. *Eusattus puncticeps* Blaisdell, new species

Form oblong-oval, moderately inflated posteriorly, strongly convex. Color deep black, above rather dull in lustre, beneath more or less shining. Surface obsoletely sculptured and smooth.

Head very densely punctate; punctures moderately small and scarcely impressed. Epistoma very feebly and broadly sinuate at apex; lobes feebly arcuate.

Pronotum scarcely twice as wide as long; apex rather deeply sinuate in circular arc; apical angles subacute and not prominent; base truncate; basal angles posteriorly produced and subacute, inner margins oblique; sides broadly and feebly arcuate, less so posteriorly and parallel, slightly convergent anteriorly; disk rather strongly convex, very finely and sparsely obsoletely punctulate, marginal bead strong; sides of disk scarcely impressed except slightly on posterior angles.

Elytra about a third longer than wide, smooth and impunctate; sides moderately arcuate, apex obtusely rounded; disk moderately convex on dorsum and rather broadly rounded laterally to the epipleura; rather abruptly and arcuately declivous posteriorly.

Prosternum finely and distinctly punctate; process short, margined throughout and punctured; propleura smooth and not rugose. Sterna finely and more or less feebly punctate. Abdomen moderately and evenly convex, glabrous, finely, very sparsely and obsoletely punctate. Legs relatively short. Described from the unique type.

Length (type), 12 mm.; width, 6.6 mm.

Type: Sex undetermined, No. 1185, Mus. Calif. Acad. Sci., collected by Virgil Owen, July 7, 1921, at San Pedro Bay, Sonora, Mexico.

Puncticeps is related to *secutus* Horn, which is at hand. In *puncticeps* the head is very densely punctured, the epistoma broadly and feebly sinuate with the lobes scarcely arcuate, the oblique sutures with small emarginations. In *secutus* the head is much less densely punctate and the epistoma is very feebly triangularly emarginate with the lobes strongly arcuate from the bottom of the emargination. In *puncticeps* the prosternum is strongly punctured and the process is margined throughout, closely but not coarsely punctate and the surface is somewhat convex; in *secutus* the prosternum is very strongly convex and finely punctate anteriorly, the process strongly margined throughout, perfectly flat on the disk and coarsely punctate, the punctures more or less coalescent.

BLAPSTINI

84. *Blapstinus aridus* Blaisdell, new species

Form oblong-oval, about two and a half times longer than wide, moderately convex. Color piceous black; antennæ and legs dark rufous; feebly shining. Pubescence sparse, fine, recumbent and rather noticeable. Wings well developed.

Head scarcely convex and not impressed, sutures not visible; epistoma feebly and broadly emarginate, angles rounded into the sides of the front which are feebly arcuate and moderately convergent; rather evenly punctate; punctures moderately small and well separated. Antennæ moderate in length; outer joints slightly compressed, feebly incrassate.

Pronotum about a half wider than long, very moderately and evenly convex; apex slightly and broadly emarginate; apical angles obtusely rounded; sides broadly and feebly arcuate, a little more strongly so in anterior half and slightly convergent; basal angles obtuse and not in the least rounded; base broadly and feebly arcuate in central two-fourths, thence sinuate to the angles; disk rather evenly punctured centrally, punctures moderate in size and separated by a distance equal to one to two times their diameter, becoming a little coarser and somewhat more deeply impressed laterally where they are more oval, not coalescent, with the intervals equal to about one-half the width of the punctures.

Elytra almost twice as long as wide; base feebly emarginate in middle two-fourths, a little wider than pronotal base; humeri obtuse, scarcely distinct; sides subparallel, feebly arcuate; apex obtusely rounded; disk feebly convex on dorsum, with regular striæ of moderate punctures which are not impressed and are separated by a distance equal to one and one-half to twice their diameter; intervals flat throughout and minutely, irregularly and sparsely punctate.

Propleura longitudinally rugose. Abdomen not very sparsely and rather feebly punctate. Legs moderate.

Male: Protarsi moderately dilated; second joint a little longer than third, the latter more strongly sinuate at apex, both transverse and equal in width; first three joints densely spongiose beneath; mesotarsi slightly dilated; first two joints slightly spongiose beneath. Abdomen distinctly impressed at middle on first three segments; fifth slightly impressed.

Female: Rather broader. Abdomen more convex.

Length (types), 5.7-5.8 mm.; width 2-2.2 mm.

Guaymas, April 8, one pair, the female imperfect.

Type: Male, No. 1186, and *allotype*, female, No. 1187, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 8, 1921, at **Guaymas, Sonora, Mexico**.

This species might be confused with *rufipes* Casey and *coronadensis* Blaisd., both occurring along the Mexican boundary, the former having been taken in northern Lower California. *Rufipes* is more convex, the elytral striæ are noticeably impressed and in the male the protarsi are more broadly dilated. In *coronadensis* the three distal antennal joints are slightly less compressed and a little wider than the preceding joints; in the male the protarsi are a little more widely dilated and the abdominal impression is feebler and less defined. I have been unable to recognize *aridus* among the species listed in the Biologia. The types of *aridus* are normally pigmented and therefore cannot be confounded with mature examples of the species with black legs.

85. *Blapstinus paradoxus* Blaisdell, new species

Form oblong-oval, a little less than $2\frac{1}{2}$ times longer than wide, rather moderately and evenly convex. Color piceous black; legs piceous. Feebly shining. Pubescence fine, sparse, brownish and inconspicuous. Wings not examined.

Head slightly and rather evenly convex; epistoma rather deeply emarginate, emargination evenly arcuate; angles rounded into the feebly arcuate sides of the front which are moderately convergent anteriorly; sutures obsolescent; punctures moderately small, separated, somewhat smaller and denser on the epistoma. Antennæ moderate in length and slightly stout, slightly incrassate in last four joints, last three noticeably compressed, tenth slightly transverse, eighth about as long as wide and scarcely widened.

Pronotum about a half wider than long, less than moderately and evenly convex; apex feebly emarginate; angles obtusely rounded; base

rather deeply bisinuate; sides subparallel, not strongly arcuate anteriorly and slightly convergent; basal angles rectangular; disk rather evenly punctured centrally, punctures separated, becoming slightly larger and deeper laterally where the intervals are flat and narrower; basal impressions feeble.

Elytra scarcely twice as long as wide, almost evenly convex but not strongly convex from side to side; base quite equal to pronotal base; humeri obtuse; sides feebly arcuate and parallel, obtusely and rather broadly rounded at apex; disk with distinct rows of moderate punctures which become slightly coarser laterally and the striæ slightly impressed; intervals flat on dorsum, feebly convex laterally and on apex, finely, sparsely and irregularly punctate.

Propleura rather strongly longitudinally rugose. Abdomen convex, sparsely, rather regularly punctate; punctures small and distinct. Legs moderate.

Length (type), 6 mm.; width 2.3 mm.; San Pedro Bay, a single specimen.

Type: Female, No. 1188, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, July 7, 1921, at **San Pedro Bay, Sonora, Mexico.**

This species differs distinctly from *aridus* in its more deeply emarginate and densely punctate epistoma. It is also larger and slightly more convex. *Sonora* Casey is a much larger species with the sides of the pronotum more strongly arcuate from apex to base; a single specimen of *sonora* is at hand. *Paradoxus* evidently is not recorded in the Biologia.

86. *Blapstinus amnosus* Blaisdell, new species

Form oblong-oval, rather less than moderately convex. Color dark piceous, legs somewhat lighter; surface slightly shining. Pubescence slightly coarse, almost conspicuous fuscous and recumbent. Wings well developed.

Head moderately convex, especially about the eyes; epistoma feebly and broadly emarginate; angles rounded into sides of front which are quite straight and distinctly convergent anteriorly; epistoma slightly convex; punctures separated, rather small and almost evenly distributed. Antennæ moderate in length and rather slender; outer four joints slightly wider, feebly compressed.

Pronotum transversely oblong, about a half wider than long; apex feebly emarginate, transverse in middle three-fifths; apical angles slightly prominent anteriorly and obtusely rounded; base broadly arcuate in about middle three-fifths, sinuate laterally; sides parallel, very feebly arcuate, more strongly so and converging anteriorly; basal angles almost rectangular; disk evenly and not strongly convex; punctures rather strong throughout, having a slight tendency to coalesce in the lateral area.

Elytra oblong-oval, not quite twice as long as wide; base very little wider than pronotal base, humeri obtuse; sides parallel in basal half, thence feebly arcuate, becoming more strongly so as the apex is attained, the latter obtusely rounded; disk very feebly convex on dorsum; punctures arranged in distinct rows and almost slightly impressed, moderately small but well defined; separated by a distance equal to about two times their own diameter; striæ rather more strongly impressed laterally and on apex, sparsely, minutely and distinctly punctate.

Propleura longitudinally rugose. Abdomen rather strongly punctate; punctures well defined. Legs moderate.

Male: A little narrower. Protarsi moderately strongly dilated, rather gradually increasing in width from first to third, the latter apparently a little wider than the second, all three densely spongiöse beneath; mesotarsi feebly dilated, first joints spongiöse beneath. Abdomen not strongly impressed on first three segments; fifth feebly impressed at apex. Female: Slightly broader. Abdomen more convex.

Length (types), 5.6-5.8 mm.; width 2.3-2.6 mm.

Angeles Bay, eight specimens.

Type: Female, No. 1189, and *allotype*, male, No. 1190, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 5, 1921, at Angeles Bay, Lower California. Paratypes in Academy collection and in that of the author.

Amnosus differs from the other species in its rather darker color, stronger punctuation, more convergent and straighter sides of the front, and slightly different protarsi in the male. Not recognized among the species reviewed and described in the Biologia. *Amnosus* is less convex than *rufipes* and in the latter the protarsi are strongly dilated.

87. *Conibius opacus* LeConte

A long series of specimens have been referred to this species. There is considerable variation exhibited among those taken on the various islands but the variants are connected by intermediates which render specific separation impossible and varietal grading unwise. This interesting material was secured in the following localities: San Diego Island, June 11; Tortuga Island, June 22; Santa Cruz Island, June 11; Santa Catalina Island, June 12; Loreto, May 20; Angeles Bay, May 7; Las Animas Bay, May 8; Puerto Ballandra, Carmen Island, May 21; San Nicolas Bay, May 17; San Pedro Bay, July 7; San Pedro Nolasco Island, April 17. Those from San Nicolas Bay, San Pedro Nolasco Island and Santa Catalina Island present the greatest amount of variation.

Opacus is characterized by the oval elytra, the lateral edges visible throughout from above and finely reflexed, more noticeably so near the base and toward apex. The elytra may have the striæ more or less slightly impressed and there very feebly sulcate. The type locality for the species is Cape San Lucas. The protibiæ are straight and scarcely dilated and the luster is dull. The series collected by the expedition has been compared with a series taken at Santa Rosa, Lower California.

88. *Conibius reflexus* Horn

A small series was taken on Ceralbo Island, June 7. Casey considers this species not different from *opacus* Lec. I believe his opinion was based on too small a series.

89. *Conibius ventralis* Blaisdell, new species

Form oblong-oval, moderately strongly convex, slightly more than twice as long as wide. Color black; antennæ and legs rufo-piceous; luster dull.

Head moderately convex; eyes sunken; frontal suture more or less distinct; epistoma broadly and rather feebly emarginate, thence broadly arcuate with the sides of the front; coarsely and closely punctate; punctures more or less coalescent, those of the epistoma smaller and well separated. Antennæ rather robust; distal three joints transverse.

Pronotum about a half wider than long; apex rather deeply and broadly emarginate, almost slightly arcuate in middle three-fifths; apical angles rather prominent anteriorly and subacute; sides broadly and slightly arcuate in anterior two-thirds, rather straight and slightly convergent in basal third; basal angles obtuse to almost rectangular; base broadly and feebly lobed in middle three-fifths, thence sinuate to the angles; disk moderately convex, somewhat impressed along the sides which are scarcely explanate, coarsely and densely punctate; punctures coalescing more or less longitudinally, forming rugæ throughout except along apex.

Elytra not twice as long as wide; oblong-oval, moderately convex antero-posteriorly and rather abruptly arcuately declivous posteriorly; base truncate, humeri obtuse; sides broadly and evenly, feebly arcuate to the obtusely rounded apex; disk finely striate; striæ of shallow moderately small punctures, separated by a distance equal to two times their diameter; intervals flat to feebly convex laterally and on apex, minutely sparsely punctate.

Propleura longitudinally rugose. Abdomen strongly punctate, punctures almost coarse and abundant, more or less rugulose. Legs moderate in length, rather stout and quite strongly sculptured.

Male: Abdomen strongly and rather deeply impressed on first three segments in middle third, impression distinctly defined. Protibiæ straight,

gradually widened to apex which is twice the width of base. First joint of protarsi with a rounded tuft of yellowish pubescence.

Female: Abdomen rather evenly convex. Protibiæ stout and gradually widened from base to apex.

Length (types), 5.8-5.5 mm.; width 2.2-2.4 mm.

Espiritu Santo Island, a small series.

Type: Male, No. 1191, and *allotype*, female, No. 1192, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 9, 1921, on Espiritu Santo Island, Gulf of California.

Ventralis resembles *reflexus* in its dull black luster, but differs in the strongly punctured abdomen and the strong abdominal impression in the male. In *reflexus* the first two joints of the protarsi have dense and rather transverse pads of yellow pubescence.

In *opacus* the abdomen in the male is very feebly and rather narrowly impressed. The protarsi are more widely dilated and the first two joints have a pad of yellow pubescence. In *sulcatus* the protarsi of the male are without pubescent pads and the abdominal impression is shallow. In *ventralis* the margin is quite visible from above and scarcely reflexed at base and near apex.

90. *Conibius gagates* Horn

A small series was taken at Guaymas, April 10. This species is very distinct from the others by its deep black color, dull velvety luster and broad explanate sides of the pronotum.

91. *Nocibiotes granulatus* LeConte

This series was secured at Tepoca Bay, April 25; Puerto Ballandra, Carmen Island, May 27; and at Las Animas Bay, May 8.

In *granulatus* the elytra are deeply striate, the intervals convex and muricately punctured. In the male the protibiæ are very gradually widened from base to middle, below which they are suddenly arcuate, causing them to appear toothed. *Granulatus* also occurs at Ft. Yuma, California, and in Arizona.

92. *Tonibius sulcatus* LeConte

A series of nine specimens was obtained at the following places : Isla Partida, April 22; Angeles Bay, May 5 and at Pond Island, July 1, the latter taken by Mr. J. C. Chamberlin.

Sulcatus is common in San Diego County, California, and in northern Lower California; it is also found in Arizona. The pronotum is subquadrate, elytra elongate oval and deeply striate, the striæ coarsely punctured; intervals convex and sparsely punctured.

PHALERIINÆ

93. *Phaleria pilifera* LeConte

A large series was taken at the following localities : Angeles Bay, June 26, where it occurred in untold thousands on the sand beach after dark at night; Mejia Island, April 30; Granite Island, May 2; Freshwater Bay, Tiburon Island, April 23; Tepoca Bay, April 25; Las Animas Bay, May 8; and Puerto Refugio, Angel de la Guardia Island, May 1. It also occurs at Cape San Lucas and at Yuma, Arizona. The color is variable, testaceous to entirely black, or the elytral and pronotal borders alone may be pale. It is a moderately depressed species and the borders of the elytra and pronotal sides are fringed with hairs. Not mentioned in the *Biologia*.

94. *Phaleria latus* Blaisdell, new species

Form oblong-elliptical, somewhat robust and convex. Color, brownish to piceous, brownish testaceous or testaceous, in the latter case the elytral disks may be brownish.

Head rather less than one-half the width of the pronotum, transversely and broadly impressed between the anterior borders of the eyes; epistoma truncate at apex; frontal sutures obsolete; sides of front arcuately prominent at the eyes, becoming straight and converging to the obtuse lateral angle; surface finely and very sparsely punctate. Eyes not in the least prominent. Antennæ stout; joints 7-10 inclusive transverse, quite gradually clavate.

Pronotum rather transversely oblong, widest at anterior third; less than twice as wide as long; apex moderately sinuate in nearly circular arc; apical angles obtuse, slightly blunt; base quite truncate, margined; basal angles obtuse, distinct; sides moderately arcuate anteriorly, feebly so posteriorly where they are slightly convergent to the base; disk moderately and evenly convex, very finely and very sparsely punctate.

Elytra oblong, about a fourth longer than wide; base just a little wider than pronotal base; humeri obtuse, angle small and distinct; sides broadly and moderately arcuate, broadly rounded at apex, at times widest slightly behind the middle; disk distinctly striate, striæ impressed, rather more strongly so at apex, impunctate; intervals slightly convex, very finely and sparsely punctate.

Propleura with very sparse, small asperate punctures and scattered hairs along the pronotal margin; prosternum with a broad loose tuft of long hairs at middle near apical border. Epipleura with fine and very sparse setigerous punctures; setæ hair-like. Abdomen finely and sparsely punctured; punctures somewhat coarse laterally; each segment with a line of setigerous punctures along apical margin; setæ moderately long and backwardly directed. Legs moderately short; outer angle of protibiæ broadly rounded, lateral edge apparently entire but with a row of short broad spinules backwardly directed and not visible from the front.

Male: Rather less broad than the female with less arcuate sides.

Length (types), 7-7.9 mm.; width 3.5-3.8 mm.

San Luis Island, April 27; Gonzales Bay, April 28, a fair series.

Type: Female, No. 1193, and *allotype*, male, No. 1194, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 27, 1921, on **San Luis Island, Gulf of California**. Paratypes in Academy collection and in that of the author.

Latus is broader and stouter than any of our west coast species found north of the Mexican boundary. It does not agree with any of the species given in the *Biologia*.

DIAPERINÆ

95. *Platydema subquadratum* Motschulsky

One specimen was taken on San José Island, May 28. This species has a closely punctured head, a regular and distinct pronotal punctuation and a somewhat depressed subquadrate form; the epipleura, legs and under surface are pale ferruginous; the antennæ red with the intermediate joints darker. Length 4-7 mm. A common species in Mexico, Nicaragua, Guatemala, and extending northward into California, Arizona and New Mexico.

ULOMINÆ

96. *Echocerus angelicus* Blaisdell, new species

A considerable series (33 specimens) of a species quite different from those given in the *Biologia* was taken at Angeles Bay by Mr. J. C. Chamberlin. It may be defined as follows:

Male: Form elongate, parallel, rather more than three times as long as wide. Color pale ferruginous to testaceous.

Head finely and very sparsely punctate, smooth; vertex with slightly larger and more numerous punctures; mandibles armed above with long, erect, sickle-shaped incurved horn; interocular region transversely raised into an arcuate ridge which forms a small subacute tubercle at the ocular margin, more acutely raised at the middle and sinuate on the median line; front below concave; sides of front before the eyes moderately prominent, not more so than the eyes, more strongly arcuate anteriorly.

Pronotum about a fourth wider than long, evenly convex; apex subtruncate, angles feebly rounded; sides broadly and not strongly arcuate, parallel; marginal bead fine; base feebly arcuate, almost subtruncate; angles obtuse; disk extremely narrowly impressed within the bead; evenly and not closely punctate, punctures moderately small.

Elytra oblong-oval, parallel, rather broadly rounded at apex; disk finely striate; humeri obtuse; intervals finely and irregularly punctate.

Propleura densely and not coarsely, subasperately punctate. Abdomen finely and sparsely punctate, punctures dense at the sides; fifth segment transversely and rather deeply impressed across the base.

Female: Head simply, broadly impressed before the eyes.

Length (types), 4 mm.; width 1.2-1.4 mm.

Type: Male, No. 1195, and *allotype*, female, No. 1196, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, June 27, 1921, at Angeles Bay, Lower California. Paratypes in Academy collection and in that of the author.

Analisis Champion, described in the *Biologia*, is black with the apical third of the elytra red. In *maxillosus* Fabricius, which is before me, the mandibular horns are shorter, broader and less sickle-shaped, and the front is bituberculate and without an interocular arcuate ridge. *Maxillosus* is smaller than *angelicus*.

97. *Latheticus prosopis* Chittenden

A series of 18 specimens was collected at Marquer Bay, Carmen Island, May 23, by Mr. Chamberlin and Mr. Van Duzee. They were found beneath the bark of dead mesquite. Chittenden reports the species having been taken in the same way at Indio, California, and Hot Springs, Arizona. The species measured 2.7-3 mm. in length, and .7-.75 mm. in width. The color is pale brownish yellow; front of head very convex and the antennæ glabrous, the last five joints transverse, the eleventh truncate at apex. The narrow parallel

form is suggestive of *Hypophlœus* but it is related to *Tribolium*. In some of the specimens the fourth and fifth ventral segments are black. The prosternum in the above series is very sharply punctate and the elytral striæ of punctures are not very distinct.

98. *Mycotrogus mentalis* Blaisdell, new species

Eighteen specimens were collected by the expedition. The characters presented by these agree with Horn's definition of the genus *Mycotrogus*. The prosternum is prolonged and mucronate and the mesosternum is deeply emarginate. The head is tuberculate and the epipleura are entire and nearly as broad at apex as at the middle. The femora are somewhat compressed and the protibiæ are gradually widened to apex with the outer edge rather thick and rounded. Body winged. The species does not agree with *piccus* or *angustus* described by Horn and may be characterized as follows:

Form elongate oblong-oval, parallel, about two and a half times longer than wide, moderately depressed, only moderately convex. Color piceous, dark rufous beneath.

Head slightly convex, not closely punctate; punctures rather coarse on front of vertex, about half as large elsewhere; epistoma subtruncate; sides of front convergent and feebly arcuate and passing into the more strongly arcuate sides of the epistoma; frontal sutures slightly indicated with the surface rather feebly and broadly impressed along them. Eyes not prominent, a little less so than the sides of the front; a supraorbital carina is not present. Antennæ moderate in length, stout; third joint longer than fourth; joints seven to ten inclusive transverse.

Pronotum about a third wider than long, moderately strongly convex; apex broadly and moderately deeply emarginate, rather transverse in middle one-half; apical angles rather broadly rounded; sides broadly and moderately arcuate, marginal bead coarse and slightly reflexed; base arcuate in middle third, broadly and rather strongly sinuate laterally; basal angles subacutely rounded and rather prominent posteriorly; disk very narrowly impressed along the sides, the impression widening somewhat to the basal angles; basal impression short and rather linear, not strong, with an obsolete median line; rather sparsely punctate, punctures small and coarse intermixed in lateral third, rather fine and of one size in middle third.

Elytra oblong-oval, about twice as long as wide; base feebly trisinate, equal to pronotal base; humeri obtuse; basal margin at humeri impressed to receive the basal angles of the pronotum; sides parallel, feebly arcuate becoming more strongly so and passing into the broadly rounded apex; margin narrowly explanate and feebly reflexed; disk with eight entire

striae of moderate punctures; scutellar row more or less obsolete; intervals very sparsely and finely punctulate; slightly convex laterally, eighth noticeably so. Scutellum triangular and with few small punctures in central area.

Propleura sparsely punctured and more or less rugulose. Abdomen finely and very sparsely punctate centrally, punctures coarse at sides of the segments. Legs moderate in length, femora stout; first joint of the metatarsi longer than the second and third taken together.

Male: Small rounded tubercle above each eye; mentum convex and flattened on summit, with a rounded setigerous puncture at center; flattened area impunctate.

Female: Front not tuberculate. Mentum nearly as in male but not flattened; setigerous punctures not present; surface closely punctate.

Length (types), 4.8-5 mm.; width 1.7-1.9 mm.

Las Animas Bay, May 8; Angeles Bay, June 27.

Type: Male, No. 1197, and *allotype*, female, No. 1198, Mus. Calif. Acad. Sci., collected by Jos. C. Chamberlin, May 8, 1921, at **Las Animas Bay, Lower California**. Paratypes in Academy collection and in that of the author.

99. *Merotemnus elongatus* Horn

Two specimens of this fine species were found at Angeles Bay, May 4, and on San José Island, May 23. In the Leng Catalogue *elongatus* is given as a synonym under *filiformis* Cast. As this is only a record I shall not discuss that point. The species is shining ferruginous brown and elongate; the femora are clavate and flattened, emarginate at tip with a broad tooth at the emargination on the meso- and meta-femora. I possess a single specimen collected at San José del Cabo, Lower California.

100. *Ulosonia marginata* LeConte

A small series of eight specimens was taken at Puerto Ballandra, Carmen Island, May 22, by Mr. Virgil Owen; Pelican Island, July 5, J. C. Chamberlin, San José Island, May 28, E. P. Van Duzee.

The males of the series have the head armed with two moderately long horns. The species is elongate oblong and depressed. The horns apparently vary in length in different individuals. In the type the head is armed with two tubercles only. I have before me a male that was collected at Needles,

California, which has the head armed with two porrect horns as are the males of the above series; three other specimens taken at Needles have the head simply tuberculate. Was the species founded on a female? This question must be answered at some other time. The series studied show variation in the length of the cephalic horns.

TENEBRIONINÆ

101. *Rhinandrus sublævis* Horn

A series of seven specimens was taken by Mr. Virgil Owen and Mr. J. C. Chamberlin, at the following places: San Pedro Bay, July 7; Willard's Point, Tiburon Island, July 3; Bay at south end of Tiburon Island, July 5. This species has not previously been reported from Mexican territory. Four species of *Rhinandrus* are known in Mexico and Champion considers that *sublævis* Horn is closely allied to *obsoletus* Champ. *Sublævis* is winged and has distinct humeri, and the general facies of *Alobates pennsylvanicus* DeG. It was described from Arizona. Specimens are before me that were collected at Nogales and Phoenix, Arizona.

102. *Eupsophulus castaneus* Horn

A widely distributed species, occurring in Nevada, Arizona, southern California and Lower California. During the present expedition it was taken on San Esteban Island, April 20, at Guaymas, April 10 and at Angeles Bay. Seven specimens were secured. Another species, *Eupsophulus horni* Bates occurs in Mexico. It differs by the very close and uniform punctuation.

ADELINÆ

TRICHODERULUS Blaisdell, new genus

Mentum as long as wide, trilobed; middle lobe triangular at apex, lateral lobes rather small; last joint of maxillary palpi triangular; epipleura narrow; body clothed with long hairs. First joint of hind tarsi as long as the two following. Elytra caudate and the profemur dentate in the male.

This genus will in all probability include *Amphidora caudata* Horn. Unfortunately *caudata* is not at hand. Horn foresaw the possibility of erecting a new genus for that species. The discovery of another closely related species at Guaymas by Mr. Van Duzee shows the necessity of erecting a new genus as above. *Trichoderulus* must follow *Amphidora* in the sequence of the genera. Type of genus, *Trichoderulus longipilosus* Blaisdell, n. sp.

103. *Trichoderulus longipilosus* Blaisdell, new species

Form elongate oblong-oval to elongate-oval. Color deep black, shining and polished; clothed with quite long black or brownish-black hairs.

Pronotum about as wide as long, widest just before the middle; apex truncate in circular arc; apical angles obtuse; base truncate; angles obtuse, distinct and not in the least rounded; sides rather strongly rounded in anterior two-thirds, gradually narrowed to base; disk strongly convex, arcuately declivous at apical angles, rather abruptly declivous at sides in front of middle; coarsely and deeply punctate; punctures rather widely separated in central area, considerably denser laterally.

Elytra elongate-oval, base truncate and a little wider than pronotal base; humeri distinct, angle obtuse; sides moderately arcuate; disk moderately strongly convex, less so on dorsum, with rows of rather coarse and quite closely placed punctures; intervals with a single series of small and slightly more widely spaced punctures; each puncture of both series with a long hair.

Abdomen very coarsely and quite densely punctate and more or less rugose.

Male: More oblong-oval; caudate; cauda equal to last two abdominal segments; profemora with a small acute tooth between the middle and apex. Abdomen less convex.

Female: Elongate-oval, not caudate; elytra with a tendency to be widest behind the middle; profemora mutic. Abdomen more convex.

Length (types), 14-13 mm. (including the cauda); width 4.5-5 mm.

Guaymas, April 8, a large series taken from under stones in a barn yard.

Type: Male, No. 1199, and *allotype*, female, No. 1200, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 8, 1921, at **Guaymas, Sonora, Mexico**. Paratypes in Academy collection and in that of the author.

T. longipilosus seems to be quite distinct from *caudata* Horn. In *caudata* the hairs are more brownish, the pronotum is broader than long, the elytra with striæ of rather distantly placed punctures and the abdomen coarsely and sparsely punctate. For further consideration of the genus *Amphidora* the student is referred to Horn's Revision of the Tenebrionidæ, page 327. The following synoptical statement may be presented at the present time:

Epipleura narrow. Other joints of antennæ subglobose; first joint of metatarsi as long as the two following; intercoxal process broad and truncate.

- Prosternum produced behind the coxæ; mesosternum prominent; pronotum broader than long; abdomen sparsely punctate *caudata* Horn
- Prosternum not produced; mesosternum declivous; pronotum as wide as long; abdomen densely punctate and more or less rugose *longipilosa* n. sp.

Distribution by Localities

ISLANDS

- Angel de la Guardia: *Anepsius confluens* n. sp.; *Cryptoglossa granulifera* Champ.; *Hylocrinus oblongulus* Csy.; *Phaleria pilifera* Lec.; *Steriphanus alutaceus* Csy.; *Tonibius sulcatus* Lec.; *Triphalopsis minor*.
- Carmen: *Argoporis inconstans* Horn; *Centrioptera asperata* Horn; *Centrioptera discreta* n. var.; *Centrioptera pectoralis* Blais.; *Cerenopus concolor* Lec.; *Conibius opacus* Lec.; *Cryptadius angulatus* n. sp.; *Cryptadius sinuatus* n. sp.; *Eleodes loretensis* n. sp.; *Eleodes terricola* Blais.; *Emmenides obsoletus* n. sp.; *Hylocrinus insularis* n. sp.; *Latheticus prosopis* Chit.; *Metoponium laticolle* Csy.; *Noci-biotes granulatus* Lec.; *Telabis latipennis* n. sp.; *Trimytis obtusa* Horn; *Ulosonia marginata* Lec.
- Ceralbo: *Centrioptera asperata* Horn; *Centrioptera seriata* Lec.; *Centrioptera subornata* n. sp.; *Conibius reflexus* Horn; *Emmenides apicalis* n. sp.; *Heterasida connivens* Lec.; *Megasattus erosus* Horn; *Stibia puncticollis* Horn; *Telabis lunulata* n. sp.; *Trimytis obtusa* Horn; *Triphalus subcylindricus* n. sp.
- Coronados: *Centrioptera discreta* n. var.
- Espiritu Santo: *Centrioptera asperata* Horn; *Centrioptera discreta* n. var.; *Centrioptera spiculifera* Lec.; *Cerenopus cribratus* Horn; *Conibius ventralis* n. sp.; *Emmenides subdescalceatus* n. sp.; *Megasattus manuelis* n. var.; *Orthostibia frontalis* n. sp.; *Trimytis obtusa* Horn.
- Georges: *Triorophus laevis* Lec.
- Granite: *Phaleria pilifera* Lec.
- Ildefonso: *Centrioptera planata* n. var.; *Emmenides subdescalceatus* n. sp.; *Stibia cribrata* n. sp.
- Isla Partida: *Anepsius confluens* n. sp.; *Argoporis inconstans* Horn; *Asidina paralela* Horn; *Centrioptera sculptiventris* n. sp.; *Craniotus pubescens* Lec.; *Cryptoglossa granulifera* Champ.; *Steriphanus subopacus* Horn; *Stibia sparsa* n. sp.; *Tonibius sulcatus* Lec.; *Triphalopsis partida* n. sp.
- Isla Raza: *Anepsius confluens* n. sp.; *Argoporis inconstans* Horn.
- Mejia: *Anepsius confluens* n. sp.; *Cryptoglossa granulifera* Champ.; *Phaleria pilifera* Lec.; *Triphalopsis partida* n. sp.
- Monserate: *Centrioptera inornata* n. sp.; *Centrioptera spiculifera* Lec.; *Cerenopus concolor* Lec.; *Eleodes inflata* n. sp.; *Eleodes terricola* Blais.; *Stibia puncticollis* Horn.
- Patos: *Centrioptera variolosa* Lec.; *Steriphanus subopacus* Horn; *Trichoderulus longipilosa* n. sp.; *Triorophus laevis* Lec.; *Triphalopsis partida* n. sp.
- Pelican: *Telabis punctulata* Lec.; *Ulosonia marginata* Lec.
- Sal si Puedes: *Argoporis inconstans* Horn; *Centrioptera chamberlini* n. sp.; *Steriphanus subopacus* Horn.
- San Diego: *Centrioptera asperata* Horn; *Centrioptera discreta* n. var.; *Conibius opacus* Lec.; *Emmenides subdescalceatus* n. sp.; *Triphalus subcylindricus* n. sp.

- San Esteban: *Eupsophulus castaneus* Horn; *Steriphanus estebani* n. sp.;
Steriphanus tardus n. sp.; *Steriphanus torpidus* n. sp.
- San Francisco: *Centrioptera discreta* n. var.; *Cerenopus concolor* Lec.
- San José: *Centrioptera discreta* n. var.; *Merotemnus elongatus* Horn;
Platydema subquadratum Mots.; *Ulosonia marginata* Lec.
- San Lorenzo: *Centrioptera chamberlini* n. sp.; *Steriphanus subopacus*
Horn; *Stibia sparsa* n. sp.; *Triphalopsis minor* n. sp.; *Triphalopsis*
partida n. sp.
- San Luis: *Phaleria latus* n. sp.
- San Marcos: *Edrotes mexicanus* n. sp.
- San Pedro Martir: *Argoporis* sp.
- San Pedro Nolasco: *Argoporis æqualis* n. sp.; *Conibius opacus* Lec.;
Steriphanus subopacus Horn.
- Santa Catalina: *Centrioptera subornata* n. sp.; *Conibius opacus* Lec.;
Emmenides catalinæ n. sp.; *Stethasida catalinæ* n. sp.; *Stibia granu-*
lata n. sp.
- Santa Cruz: *Conibius opacus* Lec.; *Megasattus læviventris* n. sp.
- Santa Inez: *Asidina terricola* n. var.; *Megasattus araneosus* n. sp.;
Stibia sparsa n. sp.; *Telabis hirtipes* n. sp.; *Triphalopsis minor*, n. sp.
- Tiburón: *Centrioptera sculptiventris* n. sp.; *Centrioptera variolosa*
Horn; *Metopoloba densiventris* Csy.; *Phaleria pilifera* Lec.; *Rhinandrus*
sublævis Horn; *Steriphanus mucronatus* n. sp.; *Triphalopsis*
partida n. sp.
- Tortuga: *Conibius opacus* Lec.; *Stibia sparsa* n. sp.
- West Galleras: *Centrioptera subornata* n. var.

PENINSULA

- Agua Verde: *Cerenopus cribratus* Lec.
- Angeles Bay: *Blapstinus amnosus* n. sp.; *Centrioptera dulzuræ* Blais.;
Centrioptera pectoralis Blais.; *Chilometopon rugiceps* n. sp.; *Cryptadius*
tarsalis n. sp.; *Echocerus angelicus* n. sp.; *Hylocrinus liber-*
tus n. sp.; *Hylocrinus oblongulus* Csy.; *Merotemnus elongatus* Horn;
Metoponium angelicum n. sp.; *Mycotrogus mentalis* n. sp.; *Steri-*
phanus durus n. sp.; *Telabis lunulata* n. sp.; *Telabis serrata* Lec.;
Triphalopsis minor n. sp.
- Concepcion Bay: *Trimytilis obtusa* Horn.
- Escondido Bay: *Argoporis longipes* n. sp.; *Asidopsis divaricata* n. sp.;
Centrioptera pectoralis Blais.; *Centrioptera subornata* n. var.;
Megasattus læviventris n. sp.
- Gonzales Bay: *Phaleria latus* n. sp.
- Las Animas Bay: *Argoporis inconstans* Horn; *Conibius opacus* Lec.;
Metoponium angelicum n. sp.; *Mycotrogus mentalis* n. sp.; *Noci-*
biotes granulatus Lec.; *Phaleria pilifera* Lec.; *Telabis punctulata*
Lec.; *Telabis serrata* Lec.
- La Paz: *Metoponium pacificum* n. sp.
- Loreto: *Anepsius angulatus* n. sp.; *Centrioptera asperata* Horn; *Centri-*
optera pectoralis Blais.; *Cerenopus concolor* Lec.; *Cryptadius angu-*
latus n. sp.; *Eleodes loretensis* n. sp.; *Stibia puncticollis* Lec.;
Telabis punctulata Lec.; *Zopherodes tristis* Lec.
- Mulegé: *Eleodes vanduzeei* n. sp.; *Metoponium laticolle* Csy.
- San Nicolas Bay: *Chilometopon cribricolle* n. sp.; *Conibius opacus* Lec.;
Telaponium castaneum n. sp.

SONORA

- Guaymas: *Asidina terricola* n. var.; *Blapstinus aridus* n. sp.; *Centrioptera variolosa* Lec.; *Conibius gagates* Horn; *Edrotes mexicanus* n. sp.; *Eupsophulus castaneus* Horn; *Hylocrinus magnus* n. sp.; *Melanastus obscurus* n. sp.; *Metopoloba densiventris* Csy.; *Metoponium candidum* Csy.; *Stethasida granicollis* n. sp.; *Steriphanus alutaceus* Csy.; *Trichoderulus longipilosa* n. sp.; *Trimytis subsenilis* n. sp.; *Triorophus laevis* Lec.
- San Carlos Bay: *Argoporis labialis* n. sp.; *Argoporis alutacea* Csy.; *Centrioptera variolosa* Lec.; *Metopoloba densiventris* Csy.; *Stibia puncticollis* Lec.
- San Pedro Bay: *Argoporis alutacea* Csy.; *Blapstinus paradoxus* n. sp.; *Centrioptera sculptiventris* n. sp.; *Centrioptera variolosa* Lec.; *Conibius opacus* Lec.; *Edrotes mexicanus* n. sp.; *Eleodes inflata* Blais.; *Eusattus puncticeps* n. sp.; *Rhinandrus sublævis* Horn.
- Tepoca Bay: *Edrotes mexicanus* n. sp.; *Nocibiotes granulatus* Lec.; *Phaleria pilifera* Lec.; *Steriphanus estebani* n. sp.; *Trichoderulus longipilosus* n. sp.

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